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# Third -Party Organization Endorsement of Products: an Advertising Cue Affecting Consumer Pre-Purchase Evaluation of Goods and Services.

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**THIRD-PARTY ORGANIZATION ENDORSEMENT OF PRODUCTS:  
AN ADVERTISING CUE AFFECTING CONSUMER PRE-PURCHASE  
EVALUATION OF GOODS AND SERVICES**

**A Dissertation**

**Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy**

**in**

**The Interdepartmental Program in Business Administration (Marketing)**

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August, 2000**

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## **ABSTRACT**

Observation of advertising in current use suggests that a new type of ad is emerging as a product positioning tool. The new ad features third-party organization (TPO) product endorsement as one of the elements of the ad (e.g. "Car of the Year" award by *Motor Trend* magazine, and "4-star" mutual fund rating from *Morningstar*). Marketers appear to be using favorable TPO statements about their products to enact their positioning strategy. This dissertation proposed that TPO endorsements are perceived by consumers as extrinsic quality cues, similar to the established quality cues of brand, price, retailer reputation, and warranty. This proposition was supported by arguments from the source credibility literature, the principle of cognitive consistency, economics of information theory, signal theory, and consumer uncertainty literatures.

In two experiments, TPO endorsement was compared to celebrity endorsement for its ability to affect dependent variables related to product quality and ad informational value. Additionally, factors that may moderate the TPO endorsement – product quality perception relationship (brand, credibility of the TPO) were also tested. Each experiment consisted of 8 factorial cells (3 factors at 2 levels each) plus 2 control cells. In all, data was collected from 466 student subjects.

Compared to credible celebrity endorsements, ads containing credible TPO endorsements for the same product significantly enhanced consumer perceptions of product quality and information value of the ad. This effect was more pronounced for desktop computers (a tangible product) than auto insurance (an intangible product). For computers, endorsement cue interacted with brand cue such that the

perceived quality of a low image brand was enhanced to a greater degree than that of a high image brand going from celebrity endorsement to TPO endorsement.

It is concluded that TPO endorsement functions as an extrinsic quality cue in advertising. To consumers, TPO endorsement is beneficial because it may communicate experience and credence characteristics of products prior to purchase. For marketers, TPO endorsement may be useful in positioning products against the competition.

## **CHAPTER ONE: DISSERTATION OVERVIEW**

### **Introduction**

Imagine that you wish to purchase a laptop computer. Would your attitude toward a particular brand/model be influenced by viewing an advertisement stating that the product received the "Editor's Choice" award from *PC Magazine*? If you previously held an unfavorable opinion of the endorsed brand, would the endorsement change your attitude? Would your attitude be the same if you knew that *PC Magazine* accepted advertising from the manufacturer and donation of items to be evaluated? What if the endorsement was from a non-profit organization that accepts no advertising or product donations? All of the above questions relate to effects of product endorsement by a third-party organization (TPO), and how these effects may be moderated by source credibility (whether the TPO may have a conflict of interest leading to an endorsement bias), and brand associations (whether the TPO endorsement is consistent with your brand beliefs and brand experience). These issues are relevant because TPO endorsements are commonly found in advertising. Examples of TPO endorsements in advertising include: 5 star rating for home PC reliability and service from *PC World* magazine (Dell Computer), 4 star mutual investment fund rating from Morningstar (Van Kampen Funds), the "Editor's Choice" award from *PC Magazine* (NEC Computer Systems), and the "Car of the Year" award from *Motor Trend* magazine (Chrysler). The fact that marketers use TPO endorsements in their advertising suggests that they have an effect on consumer attitudes. Yet, the marketing literature has paid very little attention to TPO endorsements. This dissertation is intended to address this research gap.



### **Definition of TPO Endorsement**

As used here, third-party organization (TPO) endorsement is defined as product advertising that incorporates the name of a TPO and a positive evaluation of the advertised product attributed to the TPO. A TPO is an organization perceived by consumers to be independent of the advertiser. The TPO product evaluation may be in the form of a seal of approval (e.g. the American Dental Association seal of approval appearing in toothpaste advertising). Although seals meet the technical requirements to be TPO endorsements, the focus of this investigation is on TPO endorsements that compare, rate, and/or rank products within a product class. In most cases, TPOs will publish their own periodicals and review and test products as a routine part of their business.

### **Research Gaps**

The marketing literature recognizes brand, price, product features or appearance, retailer reputation, warranties, and guarantees as signals of product quality (Dawar and Parker 1994), but very little has been said about TPO endorsement as a possible signal of product quality. Beltramini and Stafford (1993) reported that consumers had difficulty identifying seals of approval logos and that consumers were confused about what a seal actually meant. More importantly, in only one of twelve seals investigated did subjects perceive the ad to be more believable with the seal than the same ad without the seal.

Regarding TPO endorsements that are comparative among products, the only apparent previous academic investigation is that of Peterson, Wilson, and Brown (1992). These authors looked at the ability of TPO endorsement to influence consumer

attitude toward the ad, attitude toward the brand, attitude toward the company, and purchase intention for six different goods/services (shoe repair, health maintenance organization, mutual fund, insect spray, digital audio player, and electric screwdriver). Fictional brands and companies were used. The TPO was operationalized as a fictional market research company, and the endorsement was a diagonal 'banner' in an ad stating that a fictional brand had been rated number one in overall customer satisfaction based on survey results. Advertisements containing TPO endorsements were found to be no more effective than ads not containing endorsements.

In contrast to the above negative results, there is empirical evidence that TPO endorsements may affect consumer behavior. The real-life equivalent of the TPO operationalized in the Peterson, Wilson, and Brown study is the J. D. Power Company. The *Wall Street Journal* has reported that sales of the Buick LeSabre allegedly rose 62% after advertising for it began boasting its J. D. Power Company rating as the most trouble-free American car (Peterson, Wilson, and Brown 1992). TPO statements unfavorable to the product may also be effective. Sales of the Isuzu Trooper plummeted 26% after a *Consumers Union* press conference (and an article in *Consumer Reports*) criticized the vehicle for its rollover tendency in crash-avoidance maneuvers (Rechtin 1996).

It is unclear why TPO endorsement had no significant effect in the Peterson, Wilson, and Brown study. Perhaps if subjects recognized a real-life TPO name, the endorsement may have been more influential (a source credibility effect). Perhaps a market research firm was not perceived by consumers to be truly independent of the manufacturer (a question of trustworthiness). Perhaps if the TPO had reported the results of product

evaluation by their own staff of product experts, the endorsement may have carried more weight (a question of expertise). Given the demonstrated power of TPO endorsement to affect consumer behavior in real life, further investigation appears warranted.

### **Dissertation Objectives**

The central theme of this thesis is that TPO endorsements may function as a signal of product/service quality for consumers. A favorable TPO endorsement is believed to result in consumer perceptions of product quality and related variables that are, on average, more favorable than product perceptions resulting from celebrity endorsement (or an absence of endorsement) of the same product. Further, the TPO endorsement-product quality perception relationship is believed to be moderated by factors such as TPO credibility (especially trustworthiness of the TPO), and product brand (whether endorsement is consonant or dissonant with brand associations held in memory). Theoretic arguments are given, hypotheses are proposed, and experiments are outlined to investigate these themes.

### **Method**

An experimental design was generated specifically to achieve the goals set forth in the preceding paragraph. TPO endorsement, celebrity endorsement, and the no endorsement condition were compared for their ability to affect variables related to the product and the ad. The rationale for this choice is that endorsement by experts (and by extension TPOs) is believed to work through the process of internalization while celebrity endorsement is believed to work through the process of identification (Friedman and Friedman 1979). Since both are endorsements yet work through

different processes, a comparison of their ability to affect perceptions of the same product was believed to be appropriate. The no endorsement condition serves as a baseline control against which the effects of the two endorsement conditions may be compared. The three endorsement types thus constitute one factor in the experiments. The second and third factors are brand image (levels of high/low) and TPO credibility (levels of high/low), respectively. The overall experimental design would be a 3 X 2 X 2 factorial, except that credibility will not be manipulated in the no endorsement condition, resulting in an unbalanced design. That is, 2 cells are missing from a full factorial design. A diagram of the 10 experimental cells is shown in Figure 1.1.

Two experiments were completed, one each for a tangible good and a service. Because purchase risk reduction is one of the hypothesized functions of TPO endorsement, and because consumers perceive greater risk in the purchase of services than goods (Murray and Schlechter 1990), it was thought appropriate to test the effects of TPO endorsement on the perception of a service as well as a tangible good. The first pretest resulted in the selection of personal computers as the tangible good and auto insurance as the service product for the main studies. Product brands to operationalize the brand image factor were determined in pretest two, along with a choice of TPO name and how to operationalize the TPO credibility factor. The objective of pretest three was to screen celebrity names for effectiveness in endorsing personal computers/auto insurance.

A convenience sample of undergraduate university business students was chosen for all pretests and both experiments. For the main studies, subjects viewed 8 by 9 inch

		High Credibility	Low Credibility	No Credibility or Endorsement Manipulation
High Image Brand	TPO Endorsement	Cell #1	Cell #2	Cell #9
	Celebrity Endorsement	Cell #5	Cell #6	
Low Image Brand	TPO Endorsement	Cell #3	Cell #4	Cell #10
	Celebrity Endorsement	Cell #7	Cell #8	

**FIGURE 1.1**  
**EXPERIMENTAL DESIGN OF MAIN STUDIES**

black and white ads and responded immediately to questionnaire statements while viewing the ad. Dependent variables in the experiments were: perceived product quality (PQ), perceived product uniqueness (PU), attitude toward the manufacturer (ATTM), perceived risk of purchase (PR), ad (information) value (IV), and attitude toward the endorser (ATTE). These six dependent variables break into two logical intercorrelated groups, a product set (PQ, PU, ATTM, and PR) and an advertisement set (IV and ATTE). The two sets were analyzed separately in MANOVA for each of the two experiments.

## **Dissertation Contributions**

Observation of current advertising suggests that TPO endorsements are being used to promote goods and services. The fact that marketers employ TPO endorsements suggests that they may affect consumer perceptions of products. However, to date, there is no academic demonstration of TPO endorsement effects or an explanation of the conditions under which these effects may occur. This dissertation is intended to fill some of this knowledge void.

It may be argued that TPO endorsements are simply a variant of expert endorsements. This dissertation counterargues this point in the theory section. In any event, there is a paucity of literature on expert endorsements and even if the two endorsements were considered as one, the breadth of dependent variables and hypotheses in this dissertation makes a significant contribution in the area of endorsements in advertising.

## **CHAPTER TWO: THEORY DEVELOPMENT AND HYPOTHESES**

### **The Quality Perception Process**

Definition. Product quality may be conceptualized as objective or subjective quality (Zeithaml 1988). Objective quality refers to the measurement of products on pre-existing criteria that are agreed upon to indicate superiority. Thus, independent judges could examine the results of these "mechanistic" tests and they would arrive at the same quality determination. Examples of objective quality may be ISO 9000 certification and product testing in the laboratories of *Consumer Reports*. In contrast, subjective quality is a human response to a product that is highly relativistic and known to differ between judges. The two concepts are not entirely independent, however, since the selection of criteria to measure "objective" quality may be subjective. Given that consumer purchase decisions are generally made without the benefit of objective quality determinations, consumer behaviorists have focused on subjective quality (more appropriately termed perceived quality).

In addition to being different from objective or actual quality, perceived quality may also be defined as: a) a higher level abstraction rather than a specific product attribute, b) a global assessment that resembles attitude, and c) a comparative judgment referenced to a consumer's evoked set (Zeithaml 1988). More broadly, perceived quality has been defined as the bridge between the basic and derived wants of the consumer; it is the extent to which a product, relative to alternatives, is perceived to be fit to provide a desired consumption experience (Steenkamp 1990). At purchase, this degree of fit can only be estimated, while upon consumption, perceived quality refers to experienced fitness for consumption.

Evaluation of product quality takes place within a comparison context. That is, a product's quality is evaluated as high or low depending on its relative superiority among products that are viewed as substitutes by the consumer (Zeithaml 1988). However, consumers rarely have complete product information available when evaluating products. Product attributes such as durability, reliability, and other performance features are often unobservable prior to purchase and consumption of the product. Unobservable product attributes may be 'inferred' from presented information (Huber and McCann 1982).

Cues. Quality cues are important to consumers in making inferences, reducing uncertainty, and forming product preferences. Attributes that signal quality have been dichotomized into intrinsic and extrinsic cues (Olson and Jacoby 1972). Intrinsic cues relate to the physical composition of the product. For example, intrinsic quality cues for a television may include size of the viewing screen and image resolution (pixel size). Extrinsic quality cues are product-related but not part of the physical product. Extrinsic cues include brand name, price, warranties, retailer reputation, and (it will be argued here) TPO endorsement. A quality cue is valued to the extent that it is believed to signal product quality. This relationship may be conceptualized as a means-end chain. The value of the means (cues) is determined by the value of the end (attributes/benefits) to which they are perceived to lead. In addition to perceived informational value, cue processing is also affected by consumer knowledge and product/purchase involvement. Consumer knowledge is an important factor in the ability to process information [cues] (Celsi and Olson 1988), while product/purchase involvement affects motivation to process information [cues] (Zaichkowsky 1985). It may be expected that



knowledgeable consumers who are highly involved with the product/purchase would process more quality cues and make more cognitive elaborations than would consumers with low knowledge and low involvement.

TPO Endorsement as a Cue. The relationship of TPO endorsement to quality cues and quality attributes is that TPO endorsement may inform consumers of unobservable product attributes such as durability, reliability, and other performance features. By informing consumers of experience and credence characteristics of a product prior to purchase, TPO endorsement may lower perceived purchase risk. For example, J. D. Power Company ratings of automobiles will indicate reliability and durability, attributes not usually known to consumers prior to product purchase.

There are two additional reasons why TPO endorsements may be an important extrinsic cue. First, the rise of internet commerce means that there will be an increasing number of consumers deprived of the opportunity to physically inspect goods before purchase. Research from direct marketing indicates that consumers perceive a higher level of risk with non-in-store purchases as compared to in-store purchases (Akaah and Korgaonkar 1988). In the absence of intrinsic cues, extrinsic quality cues such as brand and TPO endorsement may become important in reducing the perceived risk of e-commerce purchase decisions. Second, perhaps because services are intangible and heterogeneous, consumers perceive greater risk in the purchase of services than goods (Murray and Schlacter 1990). This suggests that consumers may especially value pre-purchase quality cues when shopping for services. Although little research has been done in this area, advertising encoding certain service quality dimensions has been shown to decrease consumer perception of risk (Clow, Baack, and Fogliasso 1998). It

will be proposed, later, that TPO endorsement may function as an extrinsic cue to reduce perceived risk of service purchase.

This section has defined the concept of perceived quality and discussed quality cues. The next section will provide a framework for how consumers integrate quality cues into quality attribute beliefs.

### **Formation of Quality Attribute Beliefs**

Quality attribute beliefs may be formed through three different processes (Steenkamp 1990): observation, information, and inference. Observational beliefs result from direct sensory experience with the object. With direct experience, the consumer can form quality beliefs without relying on quality cues. Marketers employ this process when they give out free samples of breakfast cereal or test drives of new cars. Trial product experience is not always possible, however, and even when available it would not say much about nutritional quality (in the case of cereal) or durability and safety (in the case of a car). For these reasons, consumers may use other cues in the quality perception process.

Product information from outside the consumer (advertisements, other consumers, consumer magazines) may also result in quality beliefs. For example, *Consumer Reports* may rate a particular lawnmower high on the ability to cut tall grass, resulting in the informational belief that "brand X cuts tall grass well". Information acceptance may occur by the process of internalization (Kelman 1961), one of three basic methods of attitude change. Consumers internalize opinions/information when the source is credible and adoption is useful in solving a problem or the adopted position is consistent with the consumer's values.

When experiential attributes of the product are unknown (either because trial test is unavailable and/or there is no information from other sources), the consumer may infer quality attributes on the basis of quality cues. The inference process is guided by prior beliefs and heuristics (schemata) held in memory (Nisbett and Ross 1980). An example of a prior belief/heuristic is "you get what you pay for" (price as quality cue).

Consumers often misinterpret incoming information to conform with their prior beliefs and/or avoid disconfirming evidence (Steenkamp 1990).

The framework of belief formation given above suggests that TPO endorsement may be most effective as a quality cue when: a) consumers have little direct experience with the product, b) the organization behind the endorsement is credible and the endorsement information is useful to the consumer in solving a problem, and c) there are few other quality cues available or consumers lack schemata to infer quality from available cues.

Having discussed quality perception, quality cues and the formation of quality beliefs, attention is now turned to endorsement types and the differences between endorsements containing advertising and advertising in general.

### **Types of Endorsers**

The Endorsement Family. Endorsement implies a recommendation about a good or service from someone other than the manufacturer/service provider. The endorsement literature has identified three basic types of endorsers (Fireworker and Friedman 1977; Friedman and Friedman 1979; Frieden 1984): celebrity spokesperson, expert, and typical consumer. These three categories generally parallel, respectively, the three dimensions of source communication identified in the literature (Wilson and Sherrell 1993): physical or social attractiveness, credibility, and perceived similarity to the

receiver. Product endorsement by an organization that is comparative among products (not just a seal of approval) is a relatively new development in advertising. The study of Peterson, Wilson, and Brown (1992), apparently the only work to address comparative product endorsement by a TPO, found TPO endorsement to have no significant effects.

It may be questioned whether TPO endorsement is simply a subtype of expert endorsement or a separate (a fourth) type of endorsement. This may be debated. However, if compared, expert and TPO endorsers appear to differ in at least three respects: perceived independence/profit orientation, access to resources, and consensus development.

First, individual expert endorsers are probably perceived to profit from their endorsement in some way. That is, individuals generally have a for-profit orientation while non-profit TPOs are known to exist. Additionally, even a for-profit TPO may be perceived as more independent from the marketer than an expert simply because the novelty of TPO endorsement makes association between the TPO and the marketer less clear in the mind of the consumer. Second, TPOs are probably perceived to have access to testing facilities, equipment, and information to a greater degree than individual experts. This suggests that technologically complex products that lend themselves to laboratory testing may be particularly suited for TPO endorsement. Third, because TPOs are probably perceived to have more than one 'expert' on their staff, TPO endorsement implies that a consensus was reached prior to endorsement. Such a check and balance system may not be attributed to an expert.

TPOs usually publish their own periodicals containing product ratings, rankings, and endorsements. Rather than focus on these editorial endorsements, this study will examine the issue of advertising containing TPO endorsements. The latter is of particular interest to marketers because: a) TPO endorsements in ads may appear repeatedly in multiple publications achieving a wider audience than the individual TPO publication, and b) marketers are able to exert control over their ads (the content of the ad and the association of the ad with the endorsement) while endorsements appearing in TPO publications are not under marketer control.

Before moving on to a more focused consideration of TPO endorsements, however, the proposed mechanisms of action of different endorsement types will be briefly reviewed.

Functional Differences Within the Endorsement Family. Kelman (1961) hypothesized three processes that may result in a receiver adopting an attitude advocated by the sender. The process of *identification* occurs when an individual adopts an attitude because it is consistent with his self-definition or reference group image. The process of *internalization* occurs when the receiver adopts an attitude because it is useful for the solution of a problem or because it is demanded by his value system. The third process, *compliance*, results in attitude adoption only to gain approval or to avoid disapproval from the sender. That is, the attitude is adopted not on the basis of its content but because it is instrumental in achieving a desired social effect. Attitudes formed as a result of these three processes are believed to differ in their resistance to change (Solomon 1992). Thus, attitudes formed through internalization are held at a high level of commitment, attitudes formed through identification are held

at an intermediate level, and attitudes resulting from the process of compliance are held with the least allegiance.

The first two of Kelman's processes are applicable to endorsements. It has been hypothesized that celebrity endorsers persuade through the process of *identification*, expert endorsers influence through the process of *internalization*, and typical consumers exert their effects through a combination of both processes (Friedman and Friedman 1979). In sum, the different types of endorsers are believed to operate by different persuasive mechanisms. On this basis, Friedman and Friedman (1979) proposed that endorser effectiveness would vary by product type. Specifically, they proposed that: a) celebrity endorsers would be most effective for products high in psychological or social risk, b) expert endorsers would be most effective for products high in financial, performance, or physical risk, and c) typical consumers would be most effective for products ranking low in risk. All of these hypotheses were supported by experimental results. Apparently, purchase risk is perceived as a problem by consumers, and the recommendations of experts are internalized to solve the problem. Conversely, consumers may identify with the sophistication and beauty of a celebrity and adopt their recommended product to emulate the image of the celebrity. In their 4 types of endorsement (none, celebrity, expert, typical consumer) X 3 types of product (vacuum cleaner, cookies, costume jewelry) factorial design, the Friedmans used a single (fictional) brand. It will later be proposed that brand interacts with endorsement.

The process whereby endorsement persuades may also be related to the three recognized dimensions of source credibility (expertise, trustworthiness, and social attractiveness) as defined by Ohanian (1991). In her study, the source was a celebrity

endorser. She collected data from 578 respondents and modeled through structural equations the relationship of the ratings of four celebrities on each of the three dimensions to purchase intention (PI). The only one of the three dimensions to significantly influence PI was expertise. The negligible influence of attractiveness on PI was explained by the fact that celebrities are almost always attractive and this is taken as a given. A lack of effect for trustworthiness was attributed to the receiver inference that celebrities are well compensated for their endorsements and therefore probably biased. O'Mahony and Meenaghan (1997/98), in an endorsement study conducted by mall intercept survey, also found support for a significant relationship between expertise and PI.

Interestingly, subjects in the O'Mahony and Meenaghan study reported an overall celebrity endorsement believability mean of 2.56 on a 1 to 5 scale, suggesting that celebrities are not perceived as very trustworthy. The question may be asked, then, why do advertisers continue to use celebrities to endorse products? Counterbalancing their negative attributes of untrustworthiness, O'Mahony and Meenaghan found that celebrity endorsers are generally perceived as attention-getting and entertaining. Thus, celebrity endorsement may be effective at the low end of the Lavidge-Steiner persuasion model. Also, it is generally acknowledged that linking a celebrity to a product may be strategically important as a means of differentiating competing products from each other. This may occur when there are few, if any, functional differences among competitors. Celebrity endorser effectiveness, however, is greatly affected by the "fit" between celebrity image and product (O'Mahony and Meenaghan 1997/98). That is, the ability of the expertise dimension to contribute to PI will probably only occur if there is

an appropriate "fit" between endorser and product. By definition, a celebrity endorser is an individual who is known to the public (entertainer, athlete, etc.) for his or her achievements other than that of the product class endorsed (Friedman and Friedman 1979). For example, Claudia Schiffer, world-famous supermodel, may endorse a perfume. The celebrity "expertise" in this case does not mean that she understands the chemistry of perfume (that would make her an expert rather than a celebrity). However, perfume would be appropriate to Schiffer's image and consumers may believe her to be qualified to give recommendations in the product class.

In some respects, TPO endorsement may be a mirror image of the positive and negative attributes of celebrity endorsement. On the negative side, TPO endorsements may not be as attention-getting as celebrity endorsements. However, on the positive side, TPO endorsements are probably perceived as more trustworthy (because endorsements are first published in the TPO's periodical). Additionally, TPO expertise is probably perceived as greater than that of a celebrity. Overall, endorsements from a credible TPO should be more effective than a celebrity endorsement (or a no-endorsement condition) when subjects' attention is not distracted and the time interval to response is very short.

### **TPO Endorsements in Advertising**

Form of TPO Endorsement. Observation of current TPO endorsements in advertising suggests that the endorsement may take one of three general forms: 1) the product is ranked against competing products in its class on one or more criteria, 2) the product is awarded a "seal" of approval by the TPO (although how the "seal"



differentiates among products in the class may be unclear), and 3) a subjective, non-comparative, statement about one or more product attributes.

An example of #1 is an ad for the Warburg Pincus Capital Appreciation Fund touting its 5-star rating from Morningstar. The fine print explains that only the top 10% of 2,916 equity funds in the class received a 5-star rating, based on risk adjusted performance over a three year period. In this example, the product is a mutual fund, the TPO is Morningstar, and the criterion is performance relative to 90-day Treasury bill return (a credence characteristic). An example of #2 is an ad for Norton AntiVirus incorporating a "seal" of approval (the WinList logo) from Windows magazine. In this example, the product is a software package and the TPO is *Windows Magazine*. However, no evaluative criterion is mentioned and it is unclear how many other brands in the product class may also have been awarded the WinList logo. An example of #3 is an ad for the Cannon BJC-6000 color inkjet printer incorporating a quote (with date of publication) from *PC Magazine*, "The Cannon BJC-6000 series Color Bubble Jet Printer offers economy and value – a savvy color printer package." In this example, the product is a color inkjet printer and the TPO is *PC Magazine*. Instead of a product ranking or an ambiguous "seal" of approval, the endorsement is in the form of a subjective statement about the product's attributes.

The above description of the three general forms of TPO endorsement does not say anything about differences in their visual impact, and this may be very important in advertising. Although the information conveyed is sometimes ambiguous, the most visually striking form is #2, the seal of approval. The stylized graphics of the seal often resemble the TPO corporate logo triggering a memory within the observer and drawing

attention. The example of form #1 described above contains five 5-pointed stars to visually inform the reader of the mutual fund's ranking. Consumers are familiar with star rankings for restaurants and movies and so the star format appears to be a succinct visual conveyer of information. Form #3 (subjective statement) is the least visually interesting of the three, consisting of only text. However, the example ad contained statements from five different TPOs and the remainder of the ad copy picked up on "buzzwords" used by the TPOs to position the product in the mind of the reader. Although all three forms of TPO endorsement position the product, form #3 is probably the most flexible in its ability to address specific product attributes.

Fusion of Information Sources. Nelson (1974) has identified four sources of product information available to consumers: 1) the consumers' own experience in sampling products, 2) advertising, 3) other consumers, and 4) consumer magazines. From a communication perspective, TPO endorsements are interesting because they appear to represent a fusion of two of the three external sources of product information. The endorsements derive from consumer magazines and/or surveys of consumers, but they are contained within advertising. It is this "fusion" that lies at the heart of two important differences between advertising containing TPO endorsements and general advertising: 1) context, and 2) control.

Context. Research suggests that consumers are generally skeptical of advertising (Calfee and Ringold 1988). Indeed, consumers develop over time personal knowledge about when, why, and how marketers are trying to influence them (a "schemer schema", Wright 1985). This knowledge helps them to adapt to persuasion attempts (Friestad and Wright 1994). Because advertising containing TPO endorsements is a blend of apparent

independent information plus advertising information, consumers may process the ad with an heuristic other than the "schemer schema" used for general advertising. That is, the TPO endorsement part of the ad may be categorized as "news" while the remainder of the ad is categorized as "advertising." The significance of different categorization is that it may affect evaluation (Cohen and Basu 1987). For example, "news" may result in less source derogation and counterargument than "advertising." It is possible that advertising containing TPO endorsement is more believable and ultimately more effective than other forms of print advertising for certain products.

Control. It may be noted that advertising containing a TPO endorsement can only occur after a series of sequential steps. First, the TPO must have rendered a favorable opinion of the endorsed product and/or ranked the product better than some competitor. Second, a marketer must want to use the TPO endorsement in an ad for the product. Third, the TPO must allow the use of their name and/or logo to be used in a proposed ad endorsing the product. Certain TPOs are unwilling to do this. The name of a TPO is essentially a "brand" and the TPO may not wish to associate its name (brand) with the name (brand) of the marketer. Such an association might allow the marketer to trade on the brand equity of the TPO, while the converse would not be true for the TPO (the TPO would not logically trade on the brand of the marketer). Also, the TPO may fear a perceived loss of independence if the TPO and the marketer are linked in an ad because other endorsers (celebrities) are usually paid for their endorsements and/or stand to profit from the arrangement.

Contrast Effects. A previous section argued that TPO endorsements may be categorized by viewers as partly "news" and partly "advertising." This difference

suggests that advertising containing TPO endorsements may be perceived by readers as "different" from advertising in general. The significance of this difference is that new information (advertising) is perceived in the context of the observer's past experience, beliefs and feelings (Sherif and Hovland 1961). For example, your judgement that a box is heavy depends on the weight of other boxes you have lifted. The terms *assimilation* and *contrast* have been applied to the relationship between the observer's context and the new stimulus. Assimilation refers to a positive relation between the context and the new stimulus while contrast refers to a negative relation between the context and the new attitude object. The primary determinant of whether assimilation or contrast will occur is the distribution of the observer's context stimuli (Helson 1964). Returning to the boxlifting example, a moderately heavy box would typically be judged as light by subjects who have been lifting heavy boxes, and as heavy by subjects who have been lifting light boxes. This is a contrast effect.

It is very possible that viewers will perceive ads containing TPO endorsements as very different than the ads to which they are usually exposed, resulting in a contrast effect. This assertion is based on the fact that TPO endorsements have a different structure than most ads, and that TPO endorsement may be perceived as more informative and more believable. The significance of a contrast effect for TPO endorsement is that the rendering of a contrast judgement may predispose the TPO endorsement to further cognitive elaboration. That is, a viewer who has an interest in the product category may contrast TPO endorsement against other ads for information value and believability. This determination may earmark the ad for further processing because it is relevant and diagnostic to the purchase situation.

## **The Role of TPO Endorsement**

**Two Broad Roles.** The central theme of this paper is that TPO endorsement functions as an extrinsic quality cue to allow consumers to infer unobservable product attributes such as durability, reliability, and other performance features. In playing this role, TPO endorsement may allow the consumer to perceive that he can more accurately assess product quality prior to purchase, thereby lowering his risk of purchase. A second theme is that the incorporation of a credible TPO endorsement into advertising will enhance the information value of the ad and attitude toward the manufacturer above that of comparable advertising not containing a TPO endorsement. Arguments to support these two themes will be provided soon.

Based on the roles identified above, TPO endorsements would appear to have value to both consumers and marketers. To consumers, TPO endorsement may communicate experience and credence characteristics of products prior to purchase and in some cases compare competing brands of products on certain attributes. Both of these functions serve to lower consumer perceived risk of product purchase. For marketers, TPO endorsement may: a) make their ads more believable, b) result in the endorsed brand/model becoming part of the viewer's evoked set for the product class (if not already), c) function as a tool to position their product against the competition, and d) increase product sales (by lowering perceived risk of purchase). The ability of TPO endorsement to lower purchase risk is therefore critical to its hypothesized functions.

**Role Moderators.** It may be expected that factors which influence the risk reduction ability of TPO endorsement would act as moderators of TPO endorsement. These include: a) credibility of the TPO (endorsements of low credibility would not lower

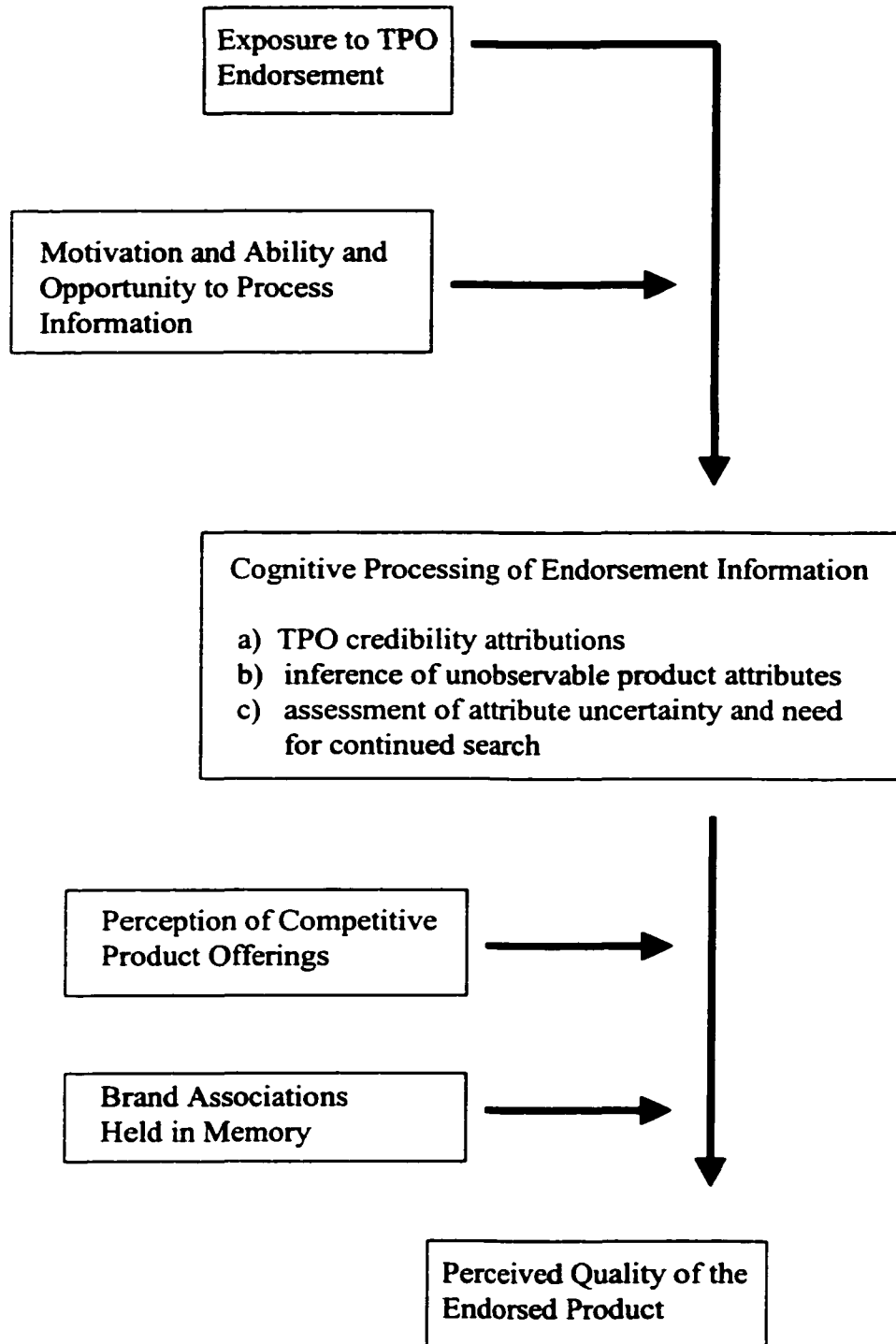
purchase risk), b) brand experience and brand knowledge (knowledgeable consumers can already assess risk without the aid of TPO endorsements), and c) type of product (services have more experience/ credence characteristics and therefore carry higher risk than goods. These moderators will later be explored in detail.

Consistent with its role of purchase risk reduction, TPO endorsement is probably most appropriate for products considered risky (financial and performance risk), products that are technologically complex or difficult to understand, or products with a lot of experience/ credence characteristics. The set of products appropriate for TPO endorsement advertising is probably a smaller subset of that found in general advertising.

**Endorsement Processing.** This section concludes with a proposed schematic of TPO endorsement processing by consumers (see Figure 2.1). This schematic is based on the general model of MacInnis and Jaworski (1989). TPO endorsements are diagrammed as being cognitively processed, and this process is moderated by individual motivation, ability, and opportunity to process information. Processing may result in: a) cognitive responses concerning source credibility, b) inference of unobservable product attributes, and c) an assessment of uncertainty and the need for continued information search. Finally, product quality perception is moderated by attitude toward the endorsed brand, type of product (good/ service), and the perceived quality of competitive offerings.

### **Endorsement Theory Development**

The hypothesized ability of TPO endorsement to affect consumer quality perception is drawn from several sources including source credibility/ attribution theory literatures,



**FIGURE 2.1**  
**A PROCESS MODEL OF TPO ENDORSEMENT**

the principle of cognitive consistency, economics of information theory, signal theory, and consumer uncertainty/ risk reduction literatures.

**Source Credibility.** It is generally accepted that highly credible sources are more persuasive than sources of low credibility (Dholakia and Sternthal 1977; Sternthal, Phillips, and Dholakia 1978). As a rationale for this finding it has been suggested that messages from highly credible sources are perceived to provide a more accurate representation of reality, thereby becoming persuasive (Eagly, Wood, and Chaiken 1978). Early work on isolating the dimensions of source credibility proposed the following factors: a) expertness of the source on the topic of concern, b) trustworthiness of the source to communicate without bias, c) reliability of the source (dependability and consistency), d) social attractiveness of the source as perceived by the message recipient, and e) degree to which others hold a positive belief about the credibility of the source (Giffin 1967). The last factor was conceptualized as social influence factor that could interact with one or more of the other factors. The literature has subsequently distilled the source credibility dimensions into three factors (Ohanian 1991): expertise, trustworthiness, and attractiveness.

The theoretical discussion below will focus primarily on the trustworthiness dimension of source credibility. Source expertise may not play a critical role in the context of TPO endorsement. Consumers may assume that TPOs would hire product experts and make available to them sufficient resources to evaluate products. Also, source trustworthiness is suggested to be more important to persuasion than source expertise (McGinnies and Ward 1980). The attractiveness factor is highly relevant to celebrity spokespersons; however, it may not be applicable to TPOs.



**Cognitive Response and Attribution Theory.** Wright (1973) has identified three primary cognitive responses mediating the acceptance of advertising: counterargument, source derogation, and support argument. Counterarguments are spontaneously generated to neutralize incoming messages that are discrepant with the recipients belief system. Conversely, if the incoming message is consistent with existing beliefs, support arguments may be generated. Source derogation is a substitute for counterargument, and it may be especially used when the source is viewed as untrustworthy. Wright believed that the impact of source derogation on the incoming message may be as devastating as counterargument. An attribution theory perspective may also be applied to Wright's source derogation response. Attribution theory suggests that message recipients will act like naïve scientists and attempt to determine the credibility of the source of the message. Within a TPO endorsement context, the discounting principle (a component of attribution theory, Kelly 1973) suggests that consumers will question why an endorser has taken a particular position. That is, consumers will evaluate the endorser to determine source expertise (accurate knowledge) and trustworthiness (a willingness to communicate accurate knowledge). If the communicator (endorser) is perceived to lack expertise and trustworthiness, the endorsement will be discounted and its effectiveness will be lost (Mizerski, Golden, and Kernan 1979).

Attribution theory implies that an endorser will score higher on the trustworthiness dimension (and consumers may evaluate the product more favorably) if the endorser does not profit from making the endorsement. Confirming this, Chrysler automobiles were found to be rated more favorably when it was revealed that celebrity endorser Frank Sinatra was paid only \$1.00 per year than when no rate of pay was stated (Folkes

1988). Within a TPO endorsement context, this finding may suggest that a non-profit TPO (such as *Consumer Reports*) would be perceived as more trustworthy, and products endorsed by CR may perhaps be evaluated more favorably, than similar products endorsed by a for-profit TPO. The question really appears to be one of independence (of the endorser from the manufacturer/marketer). That is, it would be more difficult to make negative attributions (and diminish credibility) if the endorser and marketer were totally independent (the endorser received no money, advertising revenue, product donation, personnel sharing or support of any kind from the marketer).

The previous discussions of source credibility, cognitive response, and attribution theory suggest that the credibility of an endorsing TPO should influence subject responses on the dependent variables of purchase risk (PR), perceived product quality (PQ), perceived product uniqueness (PU), and attitude toward the manufacturer (ATTM). These variables are discussed in detail in Chapter 3.

Cognitive Consistency. According to the principle of cognitive consistency, consumers value harmony in their feelings, thoughts and behaviors and they are motivated to maintain consistency among these elements. If necessary, consumers will change their thoughts and feelings to make them consistent with attitudes already held. Balance theory (Heider 1958), a corollary of cognitive consistency, involves relations among three elements in a triad (a person and his perceptions, an attitude object, and some other person or object). The relation of balance theory to TPO endorsement is that the TPO may be one of the objects in the triad. That is, the consumer may be aware of the TPO and have a positive attitude toward the TPO (a positive linkage). When the TPO endorses a product, another positive linkage in the triad is established. With two

positive linkages already established, balance theory suggests that the consumer will develop a positive linkage toward the endorsed product. Note that in balance theory the consumer would develop sentiment toward the object (product) on the basis of the linkage (endorsement) rather than on the basis of intrinsic product attributes.

Balance theory has been used to account for the widespread use of celebrities to endorse products. It has apparently not been used as an explanation for TPO endorsement, but there is no obvious reason why the principle would not apply. A TPO who dependably and consistently issues useful product recommendations may become an object of positive sentiment by consumers. These sentiment linkages may be primarily affective. Thus, balance theory may be an affective counterpart to the cognitive response triggered by source credibility. Perhaps cognitive evaluation of product attributes would be more favorable if consumers began their review with positive affective bias toward the product.

Of the five theoretic arguments for why TPO endorsements should be effective, cognitive consistency is probably the weakest because it depends on a pre-existing condition (positive sentiment toward the TPO). However, the recommendation of some TPOs, such as *Consumer Reports*, carries a great deal of weight in the mind of consumers. The opinion of *Consumer Reports* may be valued by consumers because it has led to pleasurable consumption experiences in the past, proving to be a reliable source of information. Within the experimental context to be described, a balance theory scenario (with a pre-existing sentiment toward the TPO) should affect subject responses on the dependent variable of attitude toward the endorser (ATTE).

Economics of Information. Consumers routinely make purchase decisions about products in the absence of full information about the choices available to them. This occurs because the consumer search for information has costs (Nelson 1970). There are time and travel costs to visit stores and inspect goods, and time costs to read advertising or ask other consumers about their experience with a product. Because different buyers place different values on the costs and returns of search for market information, some buyers will become more informed than others. Stigler (1961) argued that it is this dispersion of price information among buyers that allows some sellers to charge higher prices. Stigler formulated a number of propositions including: 1) the expected savings from a given search are positively related to the dispersion of prices, 2) the extent of search is negatively related to the cost of search, other things being equal, and 3) the gain from search decreases with continued search (i.e., there are diminishing returns). These propositions have been subsequently applied to product attributes other than price (Urbany 1986). Stigler's theory of search proposed that consumers will inform themselves about marketplace offerings only to the point where the marginal cost of gathering more information equals or exceeds the marginal return.

Nelson (1974) has proposed that consumers will be willing to look at advertisements as long as the marginal revenue to them of so doing is greater than the marginal cost. By providing information about experience and credence characteristics of products and sometimes product rankings on certain attributes, TPO endorsements should be perceived by consumers as valued information. Assuming a viewer has a purchase interest in an advertised product, TPO endorsement may: a) raise the value of the ad to

the viewer, and b) be perceived as so highly informative that the marginal cost of obtaining additional information outweighs the marginal benefit.

Although buyers differ in their perceived costs and benefits of search, a large proportion of shoppers exhibit minimum information search effort (Claxton, Fry and Portis 1974). Additionally, consumers are particularly attracted to "chunks" of information about products that efficiently convey meaning (Jacoby, Szybillo, and Busato-Schach 1977). It is possible that TPO endorsement may function as a "chunk" of information about a product and be perceived as a cost efficient guide to product quality (in an economics of information sense).

The previous discussion of search theory suggests that the informational value of TPO endorsement to subjects will drive subject responses on the dependent variable of information value (IV).

Signal Theory. Consumers may be uncertain about product attributes such as durability, reliability, and performance and thus perceive risk in the purchase of a product (Gal-or 1989). Manufacturers may attempt to reduce consumer uncertainty and risk perception by sending pre-purchase signals of unobservable product quality. Warranty, manufacturer reputation, and price are examples of signals intended to reduce risk perceptions (Shimp and Bearden 1982; Boulding and Kirmani 1993). To be credible, however, signals must contain a "bonding" component, a potential cost to the sender of the signal if the signal is false (Ippolito 1990). For the examples of signals given, this would be high warranty redemption costs, loss of investment in building a reputation, and loss of ability to charge a price premium.

To the extent that TPO endorsements rank competing products on certain attributes, TPO endorsements appear to function as signals of unobservable product quality. For example, a 5-star ranking from *Morningstar* separates the top 10% of mutual funds from the remainder based on risk-adjusted performance. A fund scoring only 1-star would not likely advertise their ranking. Thus, the high performing funds may pursue a different signaling strategy than low performers. This leads to a separation of the firms based on their signaling strategies, allowing consumers to infer unobservable quality based on the presence of the signal. However, it must be noted that TPO endorsement differs from the more common quality signals (warranty, manufacturer reputation, price) in that action by the TPO (an endorsement) is first required before the manufacturer/marketer can send the signal (in the form of an ad). Additionally, the "bonding" component of a TPO endorsement is mostly a cost to the TPO (loss of source credibility) rather than a cost to the manufacturer/marketer. From an attribution theory perspective, TPO endorsement may also differ from traditional quality signals sent by manufacturers/marketers in that consumers may be less likely to infer an ulterior motive to a quality signal sent by a TPO (provided the TPO is truly independent of the manufacturer/marketer). The fact that a TPO is willing to "go to bat" for an unrelated marketer and suffer potential cost suggests that TPO endorsement may be perceived by consumers as a valued signal of hidden product quality.

In their review of signals of product quality, Dawar and Parker (1994) note that the importance of a signal (brand, price, physical features, and retailer reputation) generally follows the signal's specificity. That is, the importance of brand as a signal may be due to that fact that it is shared by only a few products within a product category.

Conversely, retailer reputation is a less important quality signal, perhaps because it is less specific (retailers generally stock several competing products with a range of quality). Following this line of reasoning, TPO endorsement should be very important as a quality signal (and therefore valued by consumers) because it is model specific within a branded product line.

Within the experimental context of this study, subject responses on the dependent variable of perceived product quality (PQ) should be influenced by the TPO endorsement signal.

Uncertainty/Risk Reduction. The constructs of uncertainty and risk have already been mentioned in association with the section on economics of information and signal theory. That is, Stigler included risk (operationalized as monetary cost of purchase) in his theory of search propositions (Stigler 1961), and there would be no need to signal unobservable product quality if consumers perceived no purchase risk or experienced no purchase uncertainty. However, TPO endorsement may play a role in consumer perception of uncertainty and risk beyond the already mentioned associations.

Consumers experience two types of uncertainty (Urbany, Dickson, and Wilkie 1989): uncertainty about the alternatives available to meet their needs (knowledge uncertainty) and uncertainty about which alternative to choose (choice uncertainty). Articles in *Consumer Reports* and other TPO magazines often define evaluative criteria, compare product performance within a product class, and endorse (rate) one or more products as being better than others. Reading this information and/or the summary endorsement may serve to give the buyer more subjective certainty in making quality judgments of brands.

Risk and uncertainty are related concepts. Indeed, perceived risk is defined in terms of the consumer's perception of the uncertainty and adverse consequences of buying a product/service (Dowling and Staelin 1994). There are five classical risk components (Kaplan, Szybilo, and Jacoby 1974): performance (product failure) risk, physical (safety) risk, psychological (self-image) risk, social risk (loss of esteem, respect, or friendship), and financial risk. A sixth component (time loss risk – the cost in time, convenience and effort to get a product adjusted, repaired, or replaced) has been proposed (Brooker 1983). These six components generally parallel the possible negative consequences of product purchase.

The ability of product warranty (an extrinsic quality cue) to reduce consumer perceptions of financial risk has been demonstrated (Shimp and Bearden 1982). It is believed that TPO endorsement (another extrinsic cue) may also reduce financial risk perceptions. Additionally, TPO endorsement may also reduce performance risk perceptions. Note that the financial and performance risk components are factorially indistinct (Shimp and Bearden 1982), reflecting the logic that a product performance failure would also be a financial cost.

In reference to the dependent variables in this study, the ability of TPO endorsement to lower consumer uncertainty should influence information value (IV).

This concludes the endorsement theory section. The next section considers independent variables likely to moderate the effects of TPO endorsement on consumer perceptions. Then, specific hypotheses are developed to propose effects of the independent variables on the dependent variables.



### **Other Independent Variables**

Although previous sections have argued that TPO endorsement may affect perceived product quality, other variables likely to moderate the effectiveness of TPO endorsement have only been mentioned tangentially. There are five potential moderators/independent variables that immediately come to mind. First, one would expect that the endorsing TPO should "fit" the product. That is, an endorsement from *Good Housekeeping* magazine would probably be a better image "fit" for a hair dryer than an endorsement from *Motor Trend* magazine. Second, the "strength" and/or context of the endorsement (5 star rating versus 2 star rating; absolute versus comparative quality rating) may also affect perceived quality. Third, source credibility (trustworthiness) would probably be considered by the consumer in evaluating the endorsement. A perceived reporting bias may cause the consumer to discount the endorsement. Fourth, the endorsement may or may not be congruent with the consumer's brand beliefs and brand experience. In the case of incongruence, personal brand experience may have led to highly valenced and accessible attitudes that cause the endorsement to be rejected. Fifth, the fact that the consumer perceives more risk in the purchase of services than goods suggests that TPO endorsement, as a quality cue, may be relied upon to a greater extent in purchasing services than goods.

Three of the five potential moderators of TPO endorsement will be considered further. The "fit" moderator will not be considered, since inappropriate product/TPO endorser "fit" is a major blunder that experienced advertisers are unlikely to commit. The "strength" moderator will not be addressed at this time because it is considered first necessary to demonstrate that TPO endorsement can be effective. Only a single, strong

level of TPO endorsement will be tested at this time. The remaining three variables to be considered are: a) level of credibility of the TPO endorsement, (b) brand, and (c) type of product (good versus service).

Source Credibility. Investigators have found that source credibility may interact with other factors such that a highly credible source induces no greater persuasion than a source of low credibility (Dholakia and Sternthal 1977). For example, when subjects had a highly favorable opinion toward the object of the communication and the communicator's source credibility was identified at the start of the message, a moderately credible source was more persuasive than a highly credible source (Sternthal, Dholakia, and Leavitt 1978). This effect may be explained through cognitive response theory. High source credibility is believed to inhibit own thought generation while low source credibility is believed to stimulate own thoughts. When listeners are opposed to a message, a highly credible source inhibits counterarguments and results in a greater persuasion than a low credibility source. Conversely, when listeners favor the message, a highly credible source inhibits support arguments and is not as persuasive as a less credible source that facilitates support argument generation. Other conditions shown to interact with source credibility include issue involvement (Petty, Cacioppo, and Goldman 1981), and message congruence with source's self-interest (Eagly and Chaiken 1975). That is, high credibility conditions induce only as much attitude change as low credibility conditions when: a) the audience is highly involved with the message issue, and b) the message is incongruous with the source's self interest. It is possible that source credibility may interact with other variables in this study.

It will be proposed later than source credibility interacts with brand image in a 2-way interaction (hypothesis 6). That is, the increase in mean response going from low credibility to high credibility on the dependent variables related to quality will be greater for low image brands than high image brands. The rationale for this effect is cognitive response theory (Wright 1973). High source credibility should induce more support arguments and less source derogation than low source credibility. Also, high image brands should induce more support arguments than low image brands. However, high source credibility should aid the perceived quality of low image brands more than high image brands, leading to an interaction.

**Brand.** Brand has been defined as a name, term, sign, symbol, design, or combination of these elements, intended to identify goods and services and to differentiate them from the those of competitors (Keller 1993). Brand is a well-recognized extrinsic quality cue for products (Dawar and Parker 1994; Zeithaml 1988; Aaker 1996). With reference to TPO endorsement, an intriguing question is what would happen if a respected TPO endorsed a brand the consumer did not highly value? That is, the two cues would be in conflict, suggesting cognitive dissonance. How will the dissonance be resolved? The direction of resolution is predicted by congruity theory (Osgood and Tannebaum 1955). This theory has been used to explain the results of pairing a celebrity endorser with a product that is incongruous with his image.

The linkage of a highly-valued object to a low-valued object resulted in a loss of value to the highly-valued object and a rise in value to the low-valued object (Jacoby and Mazursky 1984). However, the magnitude of change was not equal for the two elements; change is inversely proportional to the degree of attitude polarization. For

example, if consumers valued the opinion of *PC Magazine* more than they disliked a brand endorsed by *PC Magazine*, then the value of the brand would rise more than the value of *PC Magazine* would fall. Alternatively, the consumer may revise his valuation of the brand by attributing the valuation discrepancy to product revision or incorrect product usage on his part in a prior encounter. The opposite scenario, endorsement of a highly-valued brand, would reinforce the consumer's present attitude, but it may be given little attention by consumers since it would be expected.

An alternative explanation for the result of incongruous brand/TPO endorsement pairings is suggested by the work of Wu and Shaffer (1987). These authors argue that consumers with direct versus indirect brand experience will differ in their susceptibility to a counterattitudinal message. That is, an attitude formed by direct experience is believed to be more clearly and confidently held than an attitude formed on the basis of hearsay. Accordingly, direct experience attitudes are believed to be more resistant to counterattitudinal influence. Conversely, the attitudes of indirect experience consumers may be more affected by other factors (such as source credibility) than are the attitudes held by direct experience consumers.

The work of Wu and Shaffer (1987) thus provides a rationale for an interaction hypothesis. That is, if brands are classified into high and low image, consumers may be less likely to have direct experience with low image brands because they are perceived to not perform well. This particular subject group may be susceptible to the persuasive influence of positive endorsements by TPO's of high source credibility, such that the increase in perceived quality going from celebrity endorsement to TPO endorsement is greater for low image brands than for high image brands (later stated formally as

hypothesis 5). Again, the explanation is that attitudes formed from indirect experience are less highly valenced than attitudes formed as the result of direct experience.

Recent investigations into attitude correction could perhaps be applied to explaining how TPO endorsement of a low image brand (an incongruous pairing) could result in subjects holding a favorable attitude toward the brand. As stated above, subjects may hold a low opinion of a brand based on word-of-mouth or other non-direct experience. The discrepancy between the TPO endorsement and the subject's initial attitude toward the brand may prompt the subject to review this initial attitude for bias. Bias would include attitude formation based on irrelevant (contextual) data, inappropriate inferences, or overlooked crucial data. People are generally inclined to review their attitudes because they prefer to hold views that are free from bias (Petty and Wegener 1993).

It has been found that subjects will only undertake to correct their attitudes if three conditions are met (Myers-Levy and Malaviya 1999). These conditions include: 1) awareness of possible bias in judgement, 2) identification of a "naïve theory" of how and to what extent the bias affected judgement, and 3) a willingness to expend cognitive resources to correct the judgement. Judgement correction is often extreme and in the opposite direction to that suggested by the bias (Myers-Levy and Malaviya 1999). Combining the streams of thought from Wu and Shaffer (1987) and Myers-Levy and Malaviya (1999), it may be suggested that TPO endorsement could serve to make a subject question the accuracy of his brand judgement, and that subjects could attribute lack of direct experience with a brand as a biasing condition in their brand judgement. Further, TPO endorsements are more likely to be used to advertise expensive products

rather than inexpensive ones, suggesting that potential purchasers would be willing to expend cognitive resources to correct their brand attitudes. Thus, an incongruous TPO endorsement/ brand pairing may satisfy the three conditions needed for attitude correction. Additionally, overcorrection of attitudes is typical, suggesting in the present case that product quality perception of low image brands may be significantly enhanced in the presence of credible TPO endorsement. Attitude correction, then, could be a mechanism to explain and support the aforementioned interaction of brand image and TPO endorsement (hypothesis 5).

Product. The last independent variable is product. There are basic differences between the two forms of product (goods and services). For example, services are characterized by intangibility, heterogeneity, and inseparability (Zeithaml, Parasuraman, and Berry 1985). These characteristics imply that: a) services can not be quality inspected in advance of sale, b) services can not be quality engineered at a manufacturing plant, and c) quality evaluation is made on both the process of service delivery as well as the outcome of a service (Parasuraman, Zeithaml, and Berry 1985). These latter authors go on to note that service quality is more difficult to evaluate than product quality. That is, tangible service quality cues may be limited to physical facilities and equipment, suggesting that intangible (extrinsic) quality cues may be relied upon to a greater extent in evaluating services than goods.

The purchase of services poses other uncertainties, in addition to quality. These include (Murray and Schlacter 1990): 1) a variable price (especially in repair service because the extent of damage may not be known prior to the start of service), and 2) increased opportunity for embarrassing, distressing, or frustrating interactions with

service personnel. In sum, it is the benefit variability inherent in service offerings that increases the purchase risk of service above that of tangible goods. A central theme of this thesis is that TPO endorsement functions as an extrinsic quality cue to give consumers information that lowers their purchase risk of service purchase. Accordingly, the means-end chain analysis would argue that consumers would find TPO endorsement to be valuable because it provides diagnostic information that is otherwise difficult to acquire. Consistent with the means-end chain, the value of the cue would be greater for services than goods and greater for expensive items than low-cost items.

### **Hypotheses**

This investigation will compare the effects of advertisements containing no endorsement, celebrity endorsement, or TPO endorsement on subject perceptions of the product and the ad. This basic experimental design allows comparisons between advertisements containing endorsements versus no endorsements, and between endorsements believed to work through the process of identification (celebrities) versus endorsements believed to work through the process of internalization (TPOs). It is hypothesized that mean product and ad perceptions will fall in the following order: no endorsement, celebrity endorsement, and TPO endorsement (from least favorable to most favorable). Response differences between celebrity endorsements and the no endorsement condition are not hypothesized. However, mean response for ads containing TPO endorsement is expected to be significantly more favorable than the means for celebrity endorsements or no endorsements. There are multiple arguments for this hypothesis. First, Friedman and Friedman (1979) have argued that celebrity

endorsements work through the process of identification, and that they are most appropriate for products high in the psychological or social subdimensions of risk. Conversely, expert endorsers (and TPO endorsers by extension) are believed to work through internalization, and they are probably best suited for products high in financial, performance, and/or physical risk. Working with four types of endorsements (celebrity, expert, typical consumer, and no endorsement) and three types of products (vacuum cleaner, cookies and costume jewelry), the Friedmans hypothesized and found a highly significant endorser by product interaction. Their expert endorser was able to enhance the perception of the vacuum cleaner product, but not cookies or costume jewelry. Cookie perceptions were increased most by the typical consumer endorser while the celebrity was most effective endorsing costume jewelry. The products chosen to operationalize this study are believed to rank relatively high on the performance and financial subdimensions of risk (and this is consistent with the products TPO endorsements are currently used to advertise). The above suggests that responses in this study will be less favorable for celebrity endorsements as compared to TPO endorsements.

There are additional arguments to suggest that TPO endorsements will outperform celebrity endorsements in this investigation. O'Mahony and Meenaghan (1997/98) found that celebrity endorsements generally had low believability. Conversely, TPO endorsements should be perceived as more trustworthy than celebrity endorsements (based on the TPO being an external source of information and a bonding loss accruing mostly to the TPO rather than the marketer). Intuitively, TPOs should be perceived as having more expertise than celebrities. Also, from a search theory perspective, the



information provided in a summary TPO endorsement (e.g. rating/ranking on a comparative dimension) should be more appealing to consumers than a celebrity endorsement. Additionally, from cognitive response theory, arguments have been presented suggesting that endorsing TPOs may be perceived as trustworthy and expert, implying that TPO endorsement will result in less source derogation or counterargument generation by message recipients than some other sources. The no endorsement condition will contain the least information, therefore, it is expected to result in the least favorable responses. The above discussion leads to the following main effect hypothesis:

**H1: Subjects exposed to an ad containing a highly credible third party organization endorsement for a brand will show higher scores on measures of perceived quality (PQ), perceived uniqueness (PU), attitude toward the manufacturer (ATTM), information value (IV), and lower scores on purchase risk (PR) than will subjects exposed to either a highly credible celebrity endorsement or a no-endorsement ad for the same brand.**

Based on earlier discussions of source credibility, it is proposed that manipulation of source trustworthiness (expertise will not be manipulated) will result in changes in perceived information value of the endorsement and attitude toward the endorser. Specifically, disclosure that the third-party endorser is a for-profit organization, accepts donation from manufacturers of items to be evaluated for endorsement, and accepts advertising from manufacturers of goods that are or potentially could be evaluated for endorsement will result in lower perceived information value and attitude toward the endorser by consumers compared to disclosure that an endorser is a non-profit organization and accepts no advertising or donation of goods from manufacturers. The rationale for this hypothesis is that

diminished trustworthiness will result in source derogation argument generation by the message recipient. That is, diminished trust will act as a signal that the TPO may not have the best interests of the consumer in mind. This leads to the following main effect hypothesis:

**H2a: Subjects exposed to a highly credible third party organization endorsement for a brand will show higher scores on measures of information value (IV) and attitude toward the endorser (ATTE) than will subjects exposed to a third party organization endorsement of low credibility for the same brand.**

More specific effects of source credibility may be hypothesized. High source credibility should lead to fewer source derogation arguments being generated and a greater acceptance of the endorsement communication. Thus, highly credible TPO endorsements should result in enhanced product quality perceptions compared to endorsements of low credibility:

**H2b: Subjects exposed to a third party organization endorsement from a highly credible source will show higher scores on measures of perceived quality (PQ), perceived uniqueness (PU), attitude toward the manufacturer (ATTM), and lower scores on purchase risk (PR) than will subjects exposed to a third party organization endorsement of low credibility for the same brand.**

Additionally, subjects exposed to a TPO endorsement of low credibility may exhibit a "boomerang" effect due to the apparent insincerity of the ad. That is, subjects may generate negative affect and/or cognitions about the ad and form attitudes about the product that are in the opposite direction to that intended by the marketer (e.g., a highly insincere ad leading to a negative perception of the product). Similar "boomerang" effects have been explained in psychology by reactance theory (Brehm 1966). This leads to the following hypothesis:

**H2c: Subjects exposed to an ad containing a third party organization endorsement of low credibility will show lower scores on measures of perceived quality (PQ), perceived uniqueness (PU), and attitude toward the manufacturer (ATTM) than subjects exposed to a similar ad for the same brand not containing an endorsement.**

Brands vary in their perceived ability to deliver a desired consumption experience. More specifically, consumers look to brand as a signal of product quality (Hite, Hite, and Minor 1991). This suggests that a high image brand may be perceived to rank higher on perceived quality, perceived uniqueness, and attitude toward the brand than a low image brand. Thus, the following main effect hypothesis is offered:

**H3: Subjects exposed to an ad for a high image brand will show higher scores on measures of perceived quality (PQ), perceived uniqueness (PU), and attitude toward the manufacturer (ATTM), and lower scores on purchase risk (PR) than subjects exposed to an ad for a low image brand.**

It may be expected that consumers will evaluate product endorsers to determine if the endorsement can be attributed to an ulterior motive. If the receiver believes the endorser (communicator) to be biased, the effectiveness of the endorsement may be lost. Thus, endorsements of perceived low credibility (low trustworthiness) may result in more source derogation argument generation by the receiver than endorsements of high credibility. Additionally, unless the receiver has a pre-existing favorable opinion toward the product, a source of low credibility will probably result in the generation of fewer support arguments and more counterarguments than a source of high credibility. Based on the above, the following main effect hypothesis is offered:

**H4: Subjects exposed to a credible endorsement for a brand will show higher scores on measures of perceived quality (PQ), perceived uniqueness (PU), and attitude toward the manufacturer (ATTM), and lower scores on measures of purchase risk (PR) than subjects exposed to an endorsement for the same brand with low credibility.**

It is possible that consumers may not highly value a brand that deserves their consideration. This may occur because the consumer is not aware of the brand, or for other reasons. The work of Wu and Shafer (1987) suggests that consumers who lack direct experience with a brand and hold an unfavorable opinion of the brand are more susceptible to counterattitudinal influence than are consumers with direct brand experience. Also, it has been argued that viewing a credible TPO endorsement may prompt and facilitate brand attitude correction. It is suggested, here, that TPO endorsement of a brand with an unknown or less favorable reputation may raise quality perceptions of an unknown brand to a greater extent than the quality perceptions of a high image brand will be raised. The rationale is that few consumers will have direct experience with the low image brand (because they perceive low quality) and therefore they will be more susceptible to a counterattitudinal influence. This leads to the following interaction hypothesis:

H5: Endorsement cue will interact with brand image cue such that the increase in mean response, going from celebrity endorsement to TPO endorsement, on the dependent variables of perceived quality (PQ), perceived uniqueness (PU), and attitude toward the manufacturer (ATTM), will be greater for low image than high image brands.

As previously stated, consumers look to brand as a signal of product quality (Hite, Hite, and Minor 1991). Ads for high image brands should induce less counterargumentation in the minds of consumers than ads for low image brands. Additionally, ads with low credibility should result in more source derogation argument generation than ads with high credibility. The joint effect of the two factors should be that high source credibility aids the perceived quality of low image brands more than it aids the perceived quality of high image brands. Stated alternatively, low source

credibility may damage the perceived quality of low image brands more than it impairs the perceived quality of high image brands . This leads to the following interaction hypothesis:

**H6: Source credibility cue will interact with brand image cue such that the increase in mean response, going from low credibility to high credibility on the dependent variables of perceived quality (PQ), perceived uniqueness (PU), and attitude toward the manufacturer (ATTM) will be greater for low-image brands than high-image brands.**

### **CHAPTER 3: PRETESTING AND EXPERIMENTS**

Two experiments (each 3 X 2 X 2 unbalanced designs) were conducted as main studies, preceded by three pretests. The purpose of the pretests was to choose the appropriate operationalization of the independent variables so that the hypothesized effects may be revealed. There was one experiment each for a tangible good and a service. Each pretest and experiment will be described in more detail later. In all cases, university students enrolled in undergraduate business courses were used as subjects; they each received extra credit for their participation. General criteria for the selection of the good and service to be used as advertising stimuli include the following: 1) the products should be familiar to typical university students, 2) the products should have evaluative dimensions that are more objective than subjective, and 3) the marketplace offerings in the product class should be differentiated from each other (that is, not commodities).

This chapter begins by defining the dependent variables that are hypothesized to be affected by TPO endorsements in advertising and moderated by the effects of TPO credibility and brand image. Next, the three pretests are described. Then the two experiments are outlined, along with the measurement instruments and experimental stimuli.

#### **Dependent Variables**

As stated previously, TPO endorsement is hypothesized to affect consumer perceptions of both the product and the ad. Accordingly, dependent variables have been chosen to reflect these two broad areas of effect. The dependent variables break into two logical groups, a "product" group and an "endorsement" group. The product group

consists of: perceived product quality, perceived product uniqueness, attitude toward the manufacturer, and perceived risk of purchase. The endorsement group includes: information (ad) value, and attitude toward the endorser. The ability of TPO endorsements to stimulate favorable responses on these variables should be of interest to marketers.

Perceived product quality (PQ) is defined as the anticipated degree to which a product, relative to alternatives, will provide a desired consumption experience. Consumer perceptions of product quality are considered to be a pivotal determinant of shopping behavior and product choice (Zeithaml 1988). Perceived product uniqueness (PU) is defined as the degree to which consumers feel the brand/product is different from competing brands/products. Differentiation is central to the brand-building process (Aaker 1996). Attitude toward the manufacturer (ATTM) is defined as the degree to which the manufacturer is held in high regard, is trusted by, and respected by consumers relative to other manufacturers in its product category. Attitude toward the manufacturer may be a higher-level construct summarizing brand equity related variables. Perceived risk of purchase (PR) is defined as the level of uncertainty about the outcome and consequences (performance and financial) of product purchase. It may be noted that perceived risk is moderated by the ability of the individual to absorb a monetary loss, which is dependent upon the individual's current and future wealth (Dowling and Staelin 1994).

Information value (IV) is defined as the degree to which provided information completes the information search process for the consumer and saves the consumer time and effort in foregoing additional search. A perceived inadequacy of information would

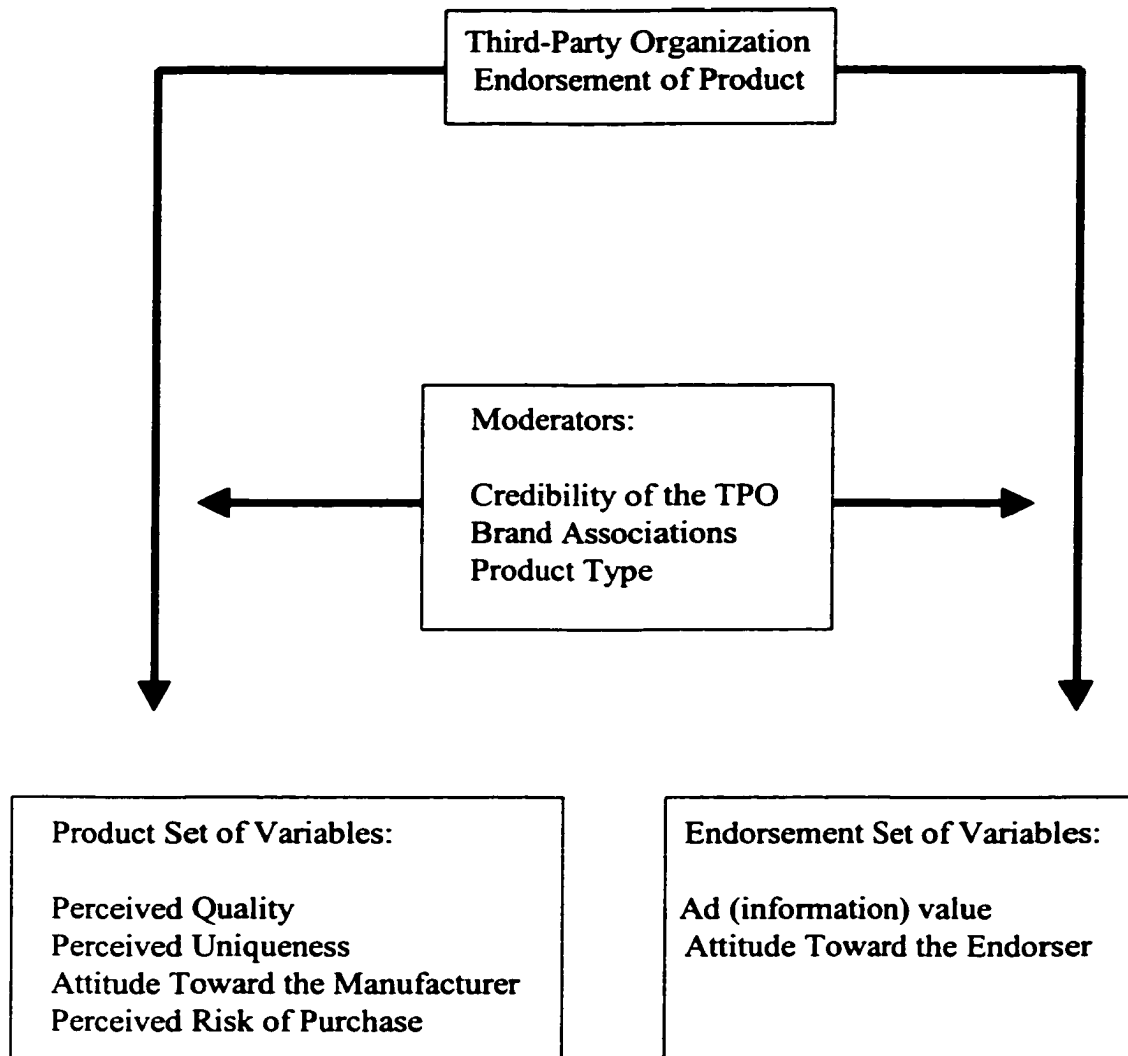
likely impede progression toward product purchase in the Lavidge-Steiner model (Lavidge and Steiner 1961). The last variable, attitude toward the endorser (ATTE), is defined as the degree to which the endorser is held in high regard, is trusted by, and respected by consumers. This measure may reflect the overall level of source credibility of the endorser.

The two groups of dependent variables may be analyzed separately in MANOVA. A schematic of the effects of independent variables on the dependent variables is shown in Figure 3.1.

### **Pretest One**

Description. The objective of this pre-test was to screen a variety of goods and services to help select appropriate products for the main studies. Screening criteria included: 1) perceived risk of choosing the wrong brand within the product class, 2) perceived range of quality among marketplace offerings for the product class, and 3) familiarity with marketplace offerings for the product class. In the ideal case, products chosen for this study should rank high on all three dimensions. A high ranking on risk is desirable because the theoretic ability of TPO endorsement to lower purchase risk is the central proposition in this study, and risk reduction can only be demonstrated if the product has an initial risk value above a baseline level. It is primarily the financial and performance components of risk that are the focus of this study. The next dimension, range of quality, attempts to measure the performance component. The third dimension, familiarity, is measured to ensure that subjects have some purchase experience with the product class. Purchase risk was considered to be the most important dimension.





**FIGURE 3.1**  
**SCHEMATIC OF EFFECTS OF TPO ENDORSEMENT**  
**AND MODERATORS ON SELECTED DEPENDENT VARIABLES**

Subjects were presented with eleven product class designations: personal computer, digital camera, pocket calculator (non-graphing), television set, automobile insurance, internet service, credit card, optometry service (exam plus eyewear), cell phone service, gym (fitness club) membership, and auto muffler replacement. These particular goods and services were selected for screening because they were advertised in publications distributed on campus, or were otherwise thought to be familiar to a university student population. A blank questionnaire from Pretest 1 is included as Appendix A.

**Measures and Analysis.** Subjects rated each of the eleven product classes on each of three dimensions (risk, range of quality, familiarity) using single, 7-point semantic differential scales. Data were received from 35 students, although two questionnaires were incomplete (listwise  $n = 33$ ). For each scale, the mean, standard deviation, and one-sample t-test (using the scale mid-point of 4 as the test value) were computed. Scale means are shown in Table 3.1. For each of the three dimensions, the eleven product class means were ranked from highest to lowest, and a range of means for the dimension was determined.

**Findings and Conclusions.** The familiarity dimension had the largest range of means (6.37 to 2.46), followed by risk (5.77 to 2.40), and then quality (5.77 to 4.37). Some of the perceived risk means did not make intuitive sense. For example, the second highest rated product on the risk dimension was a credit card – a product which many would consider to be a commodity and not particularly associated with financial or performance risk. Also, television sets were rated as the product having the highest range of quality, but this product class ranked third from the bottom on the risk dimension. Television sets are not inexpensive and so this finding was unexpected.

**TABLE 3.1**  
**RESPONSE TO PRODUCTS**  
**PRETEST ONE (n = 33 LISTWISE)**

Product Class	Familiarity	Range of Quality	Purchase Risk
Personal Computer	5.71*** 1.34 <sup>b</sup>	5.71** 1.20	4.77** 1.50
Digital Camera	3.06** 1.86	4.60* 1.59	4.11 1.66
Pocket Calculator (non-graphing)	6.31** 1.28	5.08** 2.01	2.40** 1.79
Television Set	6.37** 1.00	5.77** 1.26	3.37* 1.66
Auto Insurance	4.11 2.11	4.60* 1.72	5.77** 1.24
Internet Service	5.31** 1.81	5.09** 1.27	3.88 1.84
Credit Card	5.42** 1.65	4.71* 1.79	5.48** 1.65
Optometry Service (exam and eyewear)	3.20 2.36	4.57 1.87	4.44 1.97
Cell Phone Service	3.97 2.37	5.08** 1.31	4.57* 1.56
Gym (fitness club) Membership	4.23 2.26	4.37 1.83	3.20** 1.67
Auto Muffler Replacement	2.46** 1.92	4.44 1.73	4.35 1.43

<sup>a</sup> Mean

<sup>b</sup> Standard Deviation

\* indicates  $p < .05$ , \*\* indicates  $p < .01$  significance of t-value in one-sample t-test with the scale midpoint of four as the test value.

Of the eleven products screened, the tangible good with the highest risk mean was the personal computer (PC). The PC had the second highest ranking on range of quality, and its familiarity was also high. One sample t-test indicated that the PC means for all three dimensions were significantly ( $p < .01$ ) greater than the scale midpoint of 4. Thus, the PC appeared to meet the criteria to be selected as a test product for the main study. The highest rated service on the risk dimension was auto insurance. This product scored in about the middle of the range on the quality and familiarity dimensions. One sample t-test revealed that the auto insurance means for risk and range of quality were significantly ( $p < .05$ ) greater than 4. However, auto insurance did not score significantly different from 4 on the familiarity dimension. Some consideration was given to moving on to the next highest rated service on the risk dimension (credit card), but this product was intuitively unappealing and there was a precipitous drop in risk score to the next service product. Therefore, auto insurance appeared to be the best overall choice as a service product for the main study.

### **Pretest Two**

Description. The objective of this pre-test was to screen brands of personal computers and auto insurance for brand image in order to operationalize the (high,low) brand image variable in the main studies. Additionally, the operationalization of the TPO credibility variable (high,low) was tested, and TPO names were screened for familiarity and the expectation that the TPOs would publish product reviews of personal computers and auto insurance.

Subjects were presented with the brand names of 9 personal computers and 10 auto insurers and asked to rate each brand on a 7-point semantic differential scale of brand

image. Brand image was defined in the instructions as “your awareness of the brand, the degree to which you would consider buying one brand over others, and the degree to which you would recommend one brand over others.” For each brand, the mean, standard deviation, and one sample t-test (using the scale midpoint of 4 as the test value) was computed. Brands were then ranked from highest to lowest on brand image.

For credibility operationalization, subjects were presented with three descriptions of TPOs and asked to rate each on a 7-point semantic differential scale. The first description was that of a non-profit TPO that refused paid advertising and product donation. The second description was that of a for-profit TPO that willingly accepted paid advertising and product donation of items to be evaluated. The third description was that of a for-profit TPO that not only accepted paid advertising and product donation but also payments of an undisclosed amount from the *National Association of Manufacturers* to assist the organization in its “mission to inform the public” about goods and services.

Finally, subjects were presented with five TPO names and asked to rate each on its familiarity and the degree to which the subject would expect to see product reviews about personal computers and auto insurance in the TPO’s magazine. The five TPO names were: *Consumer Reports*, *Consumer’s Digest*, *Consumers’ Review*, *Roper’s Shopping Guide*, and *Best’s Product Review*. A blank questionnaire from Pretest 2 is included as Appendix B.

**Findings and Conclusions.** Data were collected from 45 students, although two questionnaires were incomplete (listwise  $n = 43$ ). Ranking of the brand image means revealed that the brands segregated into three groups, and this was true for both personal

computers and auto insurance. For example, personal computers had three brands in the 6.00 to 5.75 group, followed by three brands in the 5.11 to 4.62 group, then three brands in the 3.33 to 2.73 group. Auto insurance had two brands in the 6.27 to 6.00 group, followed by three brands in the 5.18 to 4.60 group, then five brands in the 2.98 to 2.62 group. Brand image means are shown in Table 3.2.

In choosing brands to operationalize the image variable, consideration was given to the fact that the hypotheses predict that endorsement from a credible TPO will enhance quality perception. Therefore, brands must be chosen that are "high" but not so high as to encounter a "ceiling" effect – meaning that TPO endorsement may not be able to enhance quality perception of a brand that is already perceived as very high quality. Accordingly, a decision was made to select "high" brands from the middle group of brand rankings. The middle group in both product categories contained three brands, and so the middle brand of the middle groups was chosen as the "high" image brand. To maximize the difference between the chosen brands, the lowest ranking brands in both product categories were chosen as the "low" image brands. For personal computers, the means for the high and low brands were 5.02 (Hewlett-Packard) and 2.73 (Acer), respectively. The corresponding means for auto insurance were 4.69 (GEICO) and 2.62 (Shelter), respectively.

The means for the three TPO credibility operationalizations (in the same sequence as described above) were 6.24, 3.64, and 3.53, respectively. Paired t-test differences between the means of operationalizations 1 and 2 ( $t=10.039$ ), and 1 and 3 ( $t=8.421$ ) were both significant ( $p<.001$ ). The difference between 2 and 3 was not significant ( $t=.466$ ). Operationalization 2 was chosen over operationalization 3 to be the "low"

**TABLE 3.2**  
**RESPONSE TO BRANDS**  
**PRETEST TWO (n = 43 LISTWISE)**

Brand	Mean Image Score	Standard Deviation
Dell	6.00**	1.51
E-Machines	2.86**	1.45
Hewlett-Packard	5.02**	1.48
IBM	5.75**	1.31
NEC	3.33**	1.65
Compaq	5.11**	1.53
Sony	4.62**	1.53
Acer	2.73**	1.62
Gateway	5.98**	1.44
Allstate	6.00**	0.90
Progressive	4.60*	1.70
American National	2.98**	1.37
Shelter	2.62**	1.53
GEICO	4.69*	1.77
State Farm	6.27**	1.19
AAA (Triple A)	5.18**	1.56
Safeco	2.78**	1.58
American Eagle	2.71**	1.62
Kemper	2.67**	1.65

\* indicates  $p < .05$ , \*\* indicates  $p < .01$  significance of one-sample t-test using the scale midpoint of four as test value.

credibility operationalization because: a) the wording of number 2 was more similar in length to number 1 than was number 3, and b) being shorter in length, number 2 required fewer cognitive resources to process than number 3. Credibility means are shown in Table 3.3.

Of the five TPO names presented to subjects, three were real TPOs whereas two were fictional. That is, *Consumer Reports*, *Consumer's Digest*, and *Consumers' Review* are real-life TPOs that publish magazines while *Roper's Shopping Guide* and *Best's Product Review* are fictional. When ranked on familiarity, the TPO names appeared to segregate into two groups, a better know group of two (means of 5.80 and 4.67) and a mostly unknown group of three (means from 2.76 to 2.40). Clearly, subjects were able to distinguish between real-life TPOs and fictional TPOs since the better known group consisted of *Consumer Reports* magazine and *Consumer's Digest* magazine. The expectations of subjects to see reviews of personal computers and auto insurance in these publications generally paralleled their familiarity responses. That is, expectations were higher for *Consumer Reports* and *Consumer's Digest* than the other TPO names.

In choosing a TPO name for the main studies, consideration was given to the fact that: a) a familiar name and expectation of product review would enhance the "high" credibility manipulation, b) however, a too familiar name may complicate the "low" credibility manipulation because it would be unbelievable, and c) the failure of Peterson, Wilson and Brown (1992) to demonstrate an effect for TPO endorsement may have been due to the use of a fictional TPO name and/or problems with credibility. Therefore, *Consumer's Digest* was selected as an appropriate TPO name because it is



**TABLE 3.3**  
**RESPONSE TO CREDIBILITY OPERATIONALIZATION**  
**PRETEST TWO (n = 43 LISTWISE)**

TPO Description	Mean Credibility	Standard Deviation
Non-Profit Organization, refuses advertising and product donation	6.24**	0.91
For-Profit Organization, accepts advertising and product donation	3.64	1.35
For-Profit Organization, accepts advertising and product donation and cash payments from manufacturers	3.53	1.75

\*\* indicates  $p < .01$  significance of t-value for one-sample t-test using scale midpoint of four as test value.

somewhat familiar but not too familiar, and because the expectations of seeing personal computer and auto insurance product reviews in *Consumer's Digest* were significantly greater than 4 (the scale midpoint). Data from TPO name testing (familiarity and expectations to see product reviews) are shown in Table 3.4.

### Pretest Three

Description. The objective of this pre-test was to screen a variety of names of famous people for familiarity, and the degree to which each celebrity would be effective in endorsing (selling) personal computers and auto insurance. The first criterion, familiarity, was defined as recognition of name and occupation, and possibly recall of face. The second criterion, effectiveness, was an attempt to measure the "match" between celebrity image and the product being endorsed. To appropriately

**TABLE 3.4**  
**RESPONSE TO TPO NAMES**  
**PRETEST TWO (n = 43 LISTWISE)**

TPO Name	Familiarity	Expectation to see Personal Computer Product review	Expectation to see Auto Insurance Product Review
Consumer Reports Magazine	5.80*** 1.55 <sup>b</sup>	6.04** 1.17	4.80** 1.90
Consumer's Digest Magazine	4.67** 1.55	4.98** 1.22	4.42* 1.39
Consumers' Review Magazine	2.76** 1.43	4.49* 1.31	3.96 1.61
Roper's Shopping Guide	2.40** 1.59	3.87 1.47	3.47* 1.65
Best's Product Review	2.47** 1.56	3.98 1.57	3.18** 1.64

<sup>a</sup> Mean

<sup>b</sup> Standard Deviation

\* indicates  $p < .05$ ,

\*\* indicates  $p < .01$  significance of t-value for one-sample t-test using scale midpoint of four as test value.

operationalize a celebrity endorsement, there should be a compatible match. A list of 10 names was generated by asking a convenience sample of students, "Can you think of any celebrity that would be effective in selling a personal computer (auto insurance) by endorsing the computer (auto insurance) in an advertisement?" Subjects were then presented with the 10 names and asked to rate each on 7-point semantic differential scales for familiarity, effectiveness in endorsing (selling) a personal computer, and effectiveness in endorsing (selling) auto insurance. Additionally, the questionnaire contained two open-ended questions to allow subjects to nominate any celebrity they felt would be effective in endorsing (selling) personal computers or auto insurance. For

each celebrity name, the mean, standard deviation, and one-sample t-test (using the scale mid-point of 4 as the test value) was computed. Celebrities were then ranked from highest to lowest on familiarity, effectiveness in endorsing (selling) a personal computer, and effectiveness in endorsing (selling) auto insurance. A blank questionnaire from Pretest 3 is included as Appendix C.

**Findings and Conclusions.** Data were collected from 44 students, although two questionnaires were incomplete (listwise  $n = 42$ ). On the familiarity criterion, none of the celebrity names were significantly below the scale mid-point of 4. However, the range of means on this dimension was rather wide (6.88 to 3.84). The range of means for the same celebrities on the effectiveness in selling (endorsing) a personal computer was also rather wide (4.91 to 1.63). Since the same list of names was used on all three dimensions, a wide range of means is expected. That is, a celebrity perceived as effective in endorsing auto insurance would probably not be perceived as effective in endorsing computers because the image of a single celebrity is unlikely to be appropriate to both products. Conversely, the range of means for the effectiveness in endorsing auto insurance was relatively narrow (4.11 to 3.05). Also, none of the celebrities had means for effectiveness in endorsing auto insurance that were significantly greater than the scale mid-point of 4, while three celebrities had means for computer endorsement that were significantly greater than 4. The means for pretest 3 are reported in Table 3.5.

Of the celebrities listed, Tom Brokaw was perceived to be the most effective endorser of personal computers. Brokaw's means for both familiarity and effectiveness

in endorsing a personal computer were significantly greater than 4. For auto insurance, Mario Andretti had the highest mean effectiveness in endorsing auto insurance.

**TABLE 3.5**  
**RESPONSE TO CELEBRITIES**  
**PRETEST THREE (n = 42 LISTWISE)**

Celebrity	Familiarity	Computer Endorsement Effectiveness	Auto Insurance Endorsement Effectiveness
Peter Jennings	5.82 <sup>a**</sup> 1.45 <sup>b</sup>	4.73 <sup>**</sup> 1.68	3.93 1.62
Tom Brokaw	6.20 <sup>**</sup> 1.02	4.91 <sup>**</sup> 1.71	3.98 1.58
Dan Rather	6.09 <sup>**</sup> 1.43	4.70 <sup>*</sup> 1.87	3.82 1.72
Barbara Walters	6.73 <sup>**</sup> 0.87	4.28 1.88	3.66 1.72
Hugh Downs	4.86 <sup>*</sup> 2.34	3.48 2.11	3.05 <sup>**</sup> 1.63
Mario Andretti	4.20 2.19	2.14 <sup>**</sup> 1.53	4.11 2.53
Richard Petty	3.84 2.32	1.86 <sup>**</sup> 1.47	3.25 <sup>*</sup> 2.46
Jay Leno	6.89 <sup>**</sup> 0.32	3.23 <sup>**</sup> 1.74	3.27 <sup>**</sup> 1.59
Alex Trebek	6.77 <sup>**</sup> 0.68	4.52 2.10	3.45 <sup>*</sup> 1.66
Evel Knevel	4.55 2.17	1.63 <sup>*</sup> 1.40	3.75 2.50

<sup>a</sup> Mean

<sup>b</sup> Standard Deviation

\* indicates  $p < .05$ , \*\* indicates  $p < .01$  significance of t-value for one-sample t-test using scale midpoint of four as test value.

However, Andretti's means for both familiarity and effectiveness in endorsing auto insurance were not significantly different from 4. It is believed that Andretti's auto endorsement effectiveness would be higher if he were more familiar. Andretti, a prominent race car driver in the 70's and 80's, is not well known to the current generation of university students. Still, he had the highest rated effectiveness in auto endorsement, and it is believed that if Andretti is identified in the endorsement as an Indy 500 winner (which is true), then he may be even more effective.

A variety of other possible endorsers were nominated by subjects. The only name that was mentioned by multiple respondents was Bill Gates as an endorser of personal computers. However, Mr. Gates may be both an expert and a celebrity. Expert endorsers (and by extension TPO endorsement) are believed to function through the process of internalization, while celebrity endorsers are believed to function through the process of identification. Because the rationale in experimental design was to compare the two processes, Mr. Gates (as an expert in computers) was deemed unsuitable.

### **Experiment One**

Description. This is an investigation of the effects of TPO endorsement on the perception of a tangible good, a personal computer. A 3 (types of endorsement) X 2 (levels of brand image) X 2 (levels of TPO source credibility) unbalanced design was used (see Figure 3.2). The types of endorsement were: a) mock ad containing no endorsement, and b) mock ad containing a celebrity endorsement, and c) mock ad containing an endorsement from a TPO. The levels of source credibility were high and low. The levels of brand image were high and low. The unbalanced design relates to the fact that source credibility was only manipulated in advertisements containing an

		High Credibility	Low Credibility	No Credibility or Endorsement Manipulation
High Image Brand	TPO Endorsement	Cell #1	Cell #2	Cell #9
	Celebrity Endorsement	Cell #5	Cell #6	
Low Image Brand	TPO Endorsement	Cell #3	Cell #4	Cell #10
	Celebrity Endorsement	Cell #7	Cell #8	

**FIGURE 3.2**  
**EXPERIMENTAL DESIGN OF MAIN STUDIES**

endorsement. Thus, two cells were missing from the full factorial design. The dependent variables were perceived quality, perceived uniqueness, attitude toward the manufacturer, perceived risk of purchase, information value, and attitude toward the endorser.

The same intrinsic cues were included in all ad stimuli. To better isolate the endorsement effect, extrinsic quality cues other than brand and endorsement (price, country of origin, warranty, and retailer name) were excluded. Source credibility of the

endorser was manipulated through disclosure of information favorable or unfavorable to the trustworthiness dimension. Subjects may assume a TPO would have sufficient resources to hire experts, so it may be difficult to manipulate expertise. Rather, subjects may be more willing to believe diminished trustworthiness than diminished expertise for TPOs. Thus, TPO endorsers were described as having high credibility (refusing paid advertising or product donations from manufacturers) or low credibility (accepting advertising and donation of products to be evaluated for endorsement from manufacturers). Similarly, celebrity endorsers were described as accepting only a nominal endorsement fee and purchasing the product with their own funds (high credibility), or accepting the customary endorsement fee and receiving the product as a gift (low credibility). The endorsement cue included the name of the endorser (a real-world person or organization) as part of the ad.

Stimuli. Stimuli were presented individually to subjects as 8 by 9 inch black and white advertisements stapled to the inside left panel of a manila file folder. The questionnaire was stapled to the inside right of the same folder permitting both the ad and the questionnaire to be viewed at the same time. A total of ten advertisements were prepared, one for each cell in the experimental design. All ten ads contained a photo image of a desktop personal computer, four intrinsic cues (statements about processor speed, memory capacity, hard disk capacity, and modem speed), and the brand name and logo. In other cells, additional information appeared (a celebrity endorsement of the PC, or a statement that the PC ranked first of 11 brands/models tested by a TPO whose credibility could be inferred to be either high or low depending on the manipulation). The ten ad stimuli used in Experiment 1 are reproduced as Appendix D.

**Measurement Instruments.** There were seven primary dependent variables in this experiment. The scales for perceived quality (4 items), perceived uniqueness (4 items), and attitude toward the manufacturer (4 items) were derived from a brand equity study in progress. The scale for purchase risk (4 items) was constructed de novo, based on face validity. The scale for information (ad) value (4 items) was adapted, in part, from Aaker and Norris (1982). The scale of attitude toward the endorser (4 items) is a rewording of the aforementioned attitude toward the manufacturer scale. Dependent variables were multi-item averages for each scale. A copy of the questionnaire is reproduced as Appendix E.

The survey instrument contained two additional scales as possible covariates in data analysis. The scale for opinion seeking (4 items) was adapted from Flynn, Goldsmith, and Eastman (1996). These authors conceptualized opinion seeking as a subset of product information search. That is, opinions are sought in an effort to acquire non-biased information that facilitates the purchase task and reduces risk. The information acquisition and risk reduction objectives of opinion seeking may perhaps be satisfied by the hypothesized functions of TPO endorsements in advertising. That is, TPO endorsements may summarize a comparison of competing products on critical attributes thereby providing information to the reader and reducing purchase risk. It was believed that subjects scoring high in opinion seeking might be particularly attracted to TPO endorsements.

A scale for a second possible covariate, involvement with product class, was also included in the questionnaire. The involvement scale (5 items) is a modification of Zaichowsky's personal involvement inventory (Mittal 1995). Involvement with the



product class may affect the subject's knowledge acquisition and motivation to process information about the product. These factors could moderate the effect of TPO endorsement on product quality perception.

## **Experiment Two**

Description. This is an investigation of the effects of TPO endorsement on the perception of a service, auto insurance. This study is similar to Experiment 1; it is also a 3 X 2 X 2 unbalanced design with the same independent and dependent variables. As in the first investigation, there is an absence of extrinsic cues other than brand and endorsement. Additionally, in this study, intrinsic cues are also absent. The same TPO name is used in both experiments, and endorsement credibility manipulations are similar to those in the first experiment. The ad stimuli, presentation of stimuli, and measurement instrument are also similar to the first study. The ad stimuli for the second experiment are reproduced as Appendix F.

## **CHAPTER FOUR: RESULTS AND HYPOTHESES TESTING**

This chapter will discuss each of the two main studies in detail beginning first with measurement issues, and then progressing to comparison of groups and tests of hypotheses.

### **Experiment One**

**Sample Size and Endorsement Manipulation Check.** All 250 questionnaire folders distributed were returned (25 folders per cell in the experimental design). However, 19 subjects missed the endorsement manipulation check. This was placed at the end of the questionnaire and asked the respondent to fold over the page containing the advertising stimuli and recall from memory whether the ad contained an endorsement, whether the endorser was a magazine or a person, and whether the endorser was non-profit or for-profit. If the three answers, as a group, were incorrect/inconsistent, the folder was removed from further consideration. Also, data in 2 folders were incomplete. In both cases, an entire page of responses was missing, suggesting that the subject had turned two pages by mistake. With these 21 questionnaires deleted from further analysis, data from 229 questionnaires were entered and this constituted the final sample (54.6% female, 45.4% male). Each of the 10 experimental cells contained data from a minimum of 20 to a maximum of 25 respondents. About 88% percent of subjects (201 of 229) reported having a computer for their own personal use, and 60% percent of those who had a computer reported participation in the purchase choice of computer brand and model.

**Brand Image Manipulation Check.** A separate survey item asked the respondent's perception of the image of the brand in the ad before exposure to the ad. Image was

defined for the respondent as the degree to which they would consider purchase of the brand and recommend it to others. For the brand manipulation to work, respondents should indicate higher intent to purchase and recommend the high image brand compared to the low image brand. As evidence of successful manipulation, brand image means for subjects exposed to the high and low brands were, respectively, 5.20 and 2.58. These two groups were significantly different on the brand image variable ( $t = 13.635$ ,  $p < .001$ ).

**Credibility Manipulation Check.** A third manipulation was credibility. This was achieved through disclosure of the relationship between the endorser and the manufacturer. In the high credibility condition, the endorser (TPO or celebrity) did not stand to gain anything from the endorsement, either directly or indirectly. In the low credibility condition, the endorser had an obvious conflict of interest. That is, the endorser received money, advertising revenue, or product donations from the manufacturer, and both parties stood to gain from the endorsement. Credibility perception was checked by a series of four questionnaire items that inquired about the sincerity, believability, truthfulness, and honesty of the ad/advertiser. From the manipulation check, the means of the high and low credibility groups were, respectively, 5.01 and 4.48. Although the two groups are significantly different on this variable ( $t = 2.795$ ,  $p < .01$ ), the difference is not as pronounced as in the brand manipulation.

It is possible that some subjects interpreted the act of disclosure of the relationship between the advertiser and the endorser (non-profit or profit) to be a basis for inferring honesty, even if the endorsement was motivated by profit. Since some subjects clearly

interpreted the "low" credibility condition to be highly credible, and vice-versa, a better method of grouping subjects on the credibility variable was needed. Therefore, subjects were post-hoc re-classified into high and low credibility conditions based on their response to the four credibility check items rather than the ad stimulus they were exposed to. If it occurred, re-classification was always into the mirror-image cell. That is, re-classification only occurred into cells with the same endorsement and brand conditions and the opposite pre-distribution credibility condition. Since credibility was not manipulated in the control cells, subject re-classification into or out of these cells did not occur. After re-classification, the mean difference between the two credibility groups widened (means of 5.84 and 3.75, respectively), and the t-test for the difference between the means was more significant ( $t = 18.475$ ,  $p < .001$ ).

Preliminary Analysis. To screen for out-of-range data entries (e.g. an entry of 77 instead of 7 for a 1 to 7 scale) and missing data, descriptive statistics on all 33 individual scale items were obtained. The number of observations and minimum and maximum suggested an absence of obvious input errors for these variables.

Scales. It is desirable that measures be both unidimensional and internally consistent. Unidimensionality (homogeneity) is demonstrated by the attainment of simple structure in exploratory factor analysis (a single high loading for each item on only one factor). If a scale is not unidimensional, then it is measuring something other than just the construct of interest. Conversely, internal consistency is achieved by a high degree of item intercorrelation (measured by coefficient alpha). It is possible for a scale to be internally consistent without being unidimensional.

To assess unidimensionality, the 33 individual scale items from the 8 major variables were entered into exploratory factor analysis with principal components extraction. Since there was a priori reason to expect 8 factors underlying the 33 items, 8 factors were requested with varimax rotation. The Bartlett test of sphericity (statistical probability that the correlation matrix has significant correlations among the variables) was high ( $p < .001$ ), suggesting the appropriateness of factor analysis for the variables as a group. Additionally, the lowest individual measure of sampling adequacy for any one variable was .75, well above the recommended minimum of .50.

Examination of the rotated component matrix revealed a relatively simple structure (scale items associated with only a single factor) except for two problematic variables. One item from the information value scale (B4) crossloaded on the perceived quality scale (loadings of .474 and .392 respectively). Also, one item from the perceived uniqueness scale (G1) crossloaded on the perceived quality scale (loadings of .579 and .404, respectively). The communality of item B4 was .446 (below the minimum guideline of .500), suggesting that deletion of the item was desirable. The communality of G1 was .691 (well above the minimum), and this item was retained despite its lack of ideal structure. Scales were computed as the mean of the individual items in the scale.

Reliability coefficients and number of items for the 8 scales in Experiment One are shown in Table 4.1; they range from a low of .8329 for information value to a high of .9563 for opinion seeking. Pearson correlations among the scales are shown in Table 4.2. Note that the correlation between perceived risk and most other constructs is negative. By definition, risk is a negative attribute; scale items were worded so that

greater response values indicated more of the negative attribute. These items were not reverse coded to avoid the confusion of having greater values mean less of an attribute.

The distributions of the 8 dependent variables were compared against the normal distribution by the Kolmogorov-Smirnov test (see Table 4.1). This test calculates the mean and standard deviation from the sample and compares the cumulative sample distribution function to the normal distribution function. Significant departures from normality were found for variables PU, ATTM, IV, ATTE, OPSEEK, and INVOL. However, it is clear from looking at Table 4.1 that these variables fall into two groups: moderate departure from normality (PU, ATTM, IV, and ATTE), and severe departure (OPSEEK and INVOL). The significance of the Kolmogorov-Smirnov Z-value for the latter variables was less than .001, indicating a highly non-normal distribution. The scales of OPSEEK and INVOL were included in the questionnaire as potential covariates; these variables will be addressed in a later section. Any non-normality in the distributions of the remaining variables is deemed to be within acceptable limits.

Preparation for MANOVA. The MANOVA procedure assumes independent observations, equality of variance-covariance matrices across treatment groups, multivariate normality of linear combinations of dependent variables, and linearity and multicollinearity among the dependent variables. The independence of observations issue is deferred since there is no test for determination of dependence. The equality of variance issue will be addressed later with Box's test. Thus, this section is concerned with multivariate normality and linearity among the dependent variables.

The assessment of multivariate normality is problematic; there is no readily available statistical test for this condition. However, as an alternative, the dependent variables of

**TABLE 4.1**  
**MEASUREMENT SCALES: EXPERIMENT ONE**

Scale <sup>a</sup>	n	Items	Coefficient Alpha	K-S Test Significance <sup>b</sup>
PQ	229	4	.8669	.359
PU	229	4	.8353	.013
ATTM	229	4	.9209	.034
PR	229	4	.8762	.096
IV	229	3	.8329	.035
ATTE	181 <sup>c</sup>	4	.9434	.040
OPSEEK	229	4	.9563	.000
INVOL	229	5	.9303	.000

<sup>a</sup>Scale abbreviations are as follows: perceived quality (PQ), perceived uniqueness (PU), attitude toward the manufacturer (ATTM), purchase risk (PR), information value (IV), attitude toward the endorser (ATTE), opinion seeking (OPSEEK), and involvement with product class (INVOL)

<sup>b</sup>Kolmogorov-Smirnov Test for normality of distribution

<sup>c</sup>Control cells were not exposed to ad stimuli containing an endorsement

perceived quality, perceived uniqueness, and attitude toward the manufacturer may be regressed upon purchase risk and a scatterplot of the standardized residuals versus the predicted risk value may be visually evaluated for evidence of violation of assumptions as well as outliers. The pattern of residuals should be random, with an equal dispersion around zero and along the range of predicted values (a null plot). There should be an absence of consistent curvilinear patterns or clustering. Additionally, the residual plot may be examined for outliers. Consideration may be given to eliminating these cases because they have a disproportionate impact on overall MANOVA results.

As a diagnostic procedure, perceived quality, perceived uniqueness, and attitude toward the manufacturer were regressed upon purchase risk as the dependent variable

**TABLE 4.2**  
**CORRELATION AMONG DEPENDENT VARIABLES: EXPERIMENT ONE**

	PQ	PU	ATTM	PR	IV	ATTE	OPSEEK
PU	.535 <sup>a</sup> .000 <sup>b</sup>						
ATTM	.455 .000	.478 .000					
PR	-.477 .000	-.190 .004	-.442 .000				
IV	.537 .000	.398 .000	.438 .000	-.322 .000			
ATTE	.408 .000	.441 .000	.528 .000	-.258 .000	.375 .000		
OPSEEK	.252 .000	.153 .020	.118 .074	-.076 .255	.097 .145	.017 .823	
INVOL	-.032 .631	.012 .859	.073 .272	.024 .713	.024 .718	.088 .240	-.052 .433

<sup>a</sup>Pearson correlation coefficient

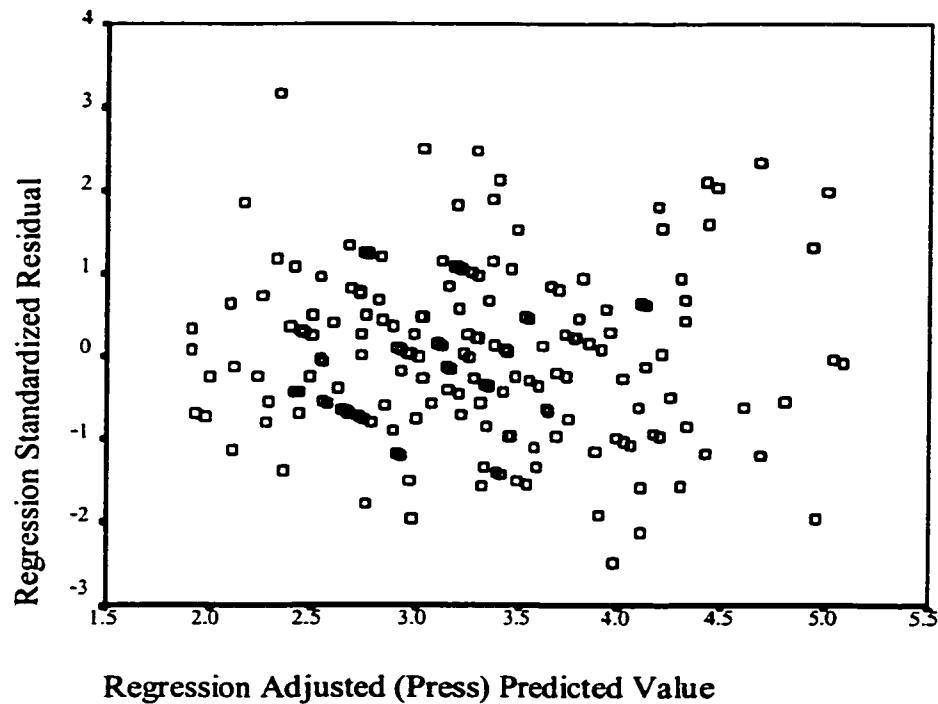
<sup>b</sup>two-tailed significance

using the enter method. The choice of purchase risk as the dependent variable was intuitively appealing as this is the most logical outcome variable of the set. A similar diagnostic was not generated for the advertisement set of dependent variables because there would only be one independent variable.

Examination of the residual scatterplot (standardized residuals versus predicted risk) revealed an essentially null plot (see Figure 4.1). That is, there was a generally random pattern of residuals with equal dispersion and an absence of curvilinear patterns. Only 1 of the 229 cases had a standardized residual outside 2.5 standard deviations from the mean. Given the solitary outlier, the subjective criteria for its identification, and the possible attendant criticism of overfitting the data if it were deleted, a decision was made to retain this case.



MANOVAs. Separate MANOVAs were run, one for the product set of dependent variables (PQ, PU, ATTM, and PR), and one for the advertisement set of dependent variables (IV and ATTE). In both cases, only the 8 cells in the full factorial portion of the experimental design ( $n = 181$ ) were included in the analysis.



**FIGURE 4.1**  
**EXAMINATION OF RESIDUALS FOR ASSUMPTIONS OF MANOVA**

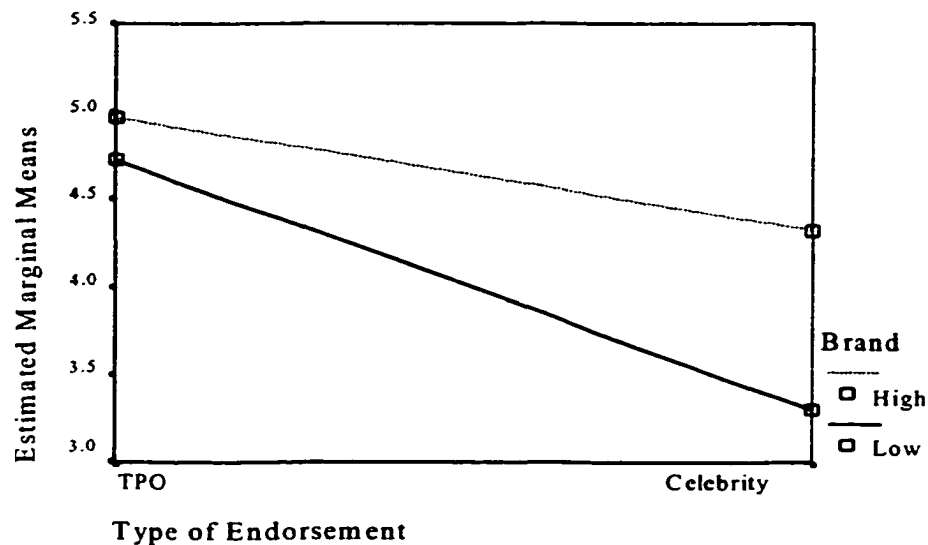
MANOVA for the Product Set of Variables. For the product set, Box's test was non-significant at  $p = .358$ , indicating equality of covariance matrices of the dependent variables across groups. Additionally, Bartlett's test of sphericity was significant at  $p < .001$ , suggesting an adequate level of correlation among the dependent measures. With these two assumptions satisfied, attention was next turned toward the multivariate results.

The independent variables of credibility, brand, and endorsement all exhibited significant main effects (see Table 4.3). However, one of four possible interactions, brand (B) by endorsement (E), was significant (Wilks'  $\lambda = .945$ ,  $F = 2.464$ ,  $p = .047$ ), so this had to be examined before the main effects could be interpreted. The source of the multivariate B x E interaction appeared to be PQ and PU (see Table 4.3). Graphical representation of these univariate interactions (see Figures 4.2 and 4.3) indicated an ordinal interaction for PQ ( $F = 5.505$ ,  $p = .020$ ) and a disordinal interaction for PU ( $F = 8.647$ ,  $p = .004$ ). Further examination suggested that the source of the B x E interaction for PU was mostly due to the celebrity side of the graph and not the TPO endorsement side (where the lines cross). Indeed, the difference between the two brand means on the TPO endorsement side of the graph (3.15 and 2.99) is not significant ( $t = .73$ ,  $p = .50$ ), suggesting that the interaction is primarily due to the difference in means on the other side of the graph ( $t = 3.29$ ,  $p < .01$ ). This suggests that disordinality, in this instance, does not preclude interpretation of the main effects.

All three main effects (credibility, brand, endorsement) were significant at  $p < .001$  (Wilks'  $\lambda$ 's of .805, .783, and .803, respectively), and all three had relatively large effect sizes (see Table 4.3). In almost all cases, the significant multivariate main effect was supported by a significant univariate effect for each of the four dependent variables. Only in the cases of PU (for brand) and PR (for endorsement) were the multivariate main effects not supported by a univariate effect. Although only one multivariate interaction was significant (brand by endorsement), there was a significant credibility by brand univariate interaction for PQ. This univariate interaction will be addressed later

in the section on hypotheses tests. The  $R^2$  for the four dependent variables in the MANOVA was as follows: PQ (.339), PU (.190), ATTM (.304), and PR (.136).

MANOVA for the Advertisement Set of Variables. A second MANOVA was conducted for the advertisement set of dependent variables (IV and ATTE). These variables satisfied the assumptions of equality of covariance matrices across groups



**FIGURE 4.2**  
**BRAND BY ENDORSEMENT INTERACTION FOR PQ**

(Box's test  $p = .135$ ) and multicollinearity (Bartlett's test  $p < .001$ ). Of the four interactions, none were significant in either a multivariate or univariate sense (see Table 4.4). The independent variables of credibility, brand, and endorsement all exhibited significant main effects ( $p < .04$ ) with Wilks'  $\lambda$ 's of .830, .963, and .910, respectively). However, unlike the MANOVA for the product variables, the strength of these three main effects varied. For example, main effect F-values ranged from 17.579 for

**TABLE 4.3**  
**RESULTS OF MANOVA, PRODUCT SET OF VARIABLES, EXPERIMENT ONE, n=181**

Multivariate						Univariate			
Effect <sup>a</sup>	Wilks' $\lambda$	Effect Size	df	F-value	Sig	PQ	PU	ATTM	PR
C	.805	.195	4/170	10.277	.000	26.475 <sup>b**</sup> .133 <sup>c</sup>	18.803** .098	26.590** .133	16.604** .088
B	.783	.217	4/170	11.776	.000	14.276** .076	3.258 .018	40.636** .190	5.709* .032
E	.803	.197	4/170	10.411	.000	38.911** .184	7.752** .043	5.378* .030	1.969 .011
CxB	.956	.044	4/170	1.978	.100	4.895* .028	.063 .000	1.331 .008	.880 .005
CxE	.976	.024	4/170	1.039	.389	.004 .000	1.868 .011	.331 .002	1.261 .007
BxE	.945	.055	4/170	2.464	.047	5.505* .031	8.647** .048	1.810 .010	.745 .004
CxBxE	.985	.015	4/170	.647	.630	.323 .002	1.496 .009	.016 .000	.334 .002

<sup>a</sup> Credibility (C), Brand (B), Endorsement (E)

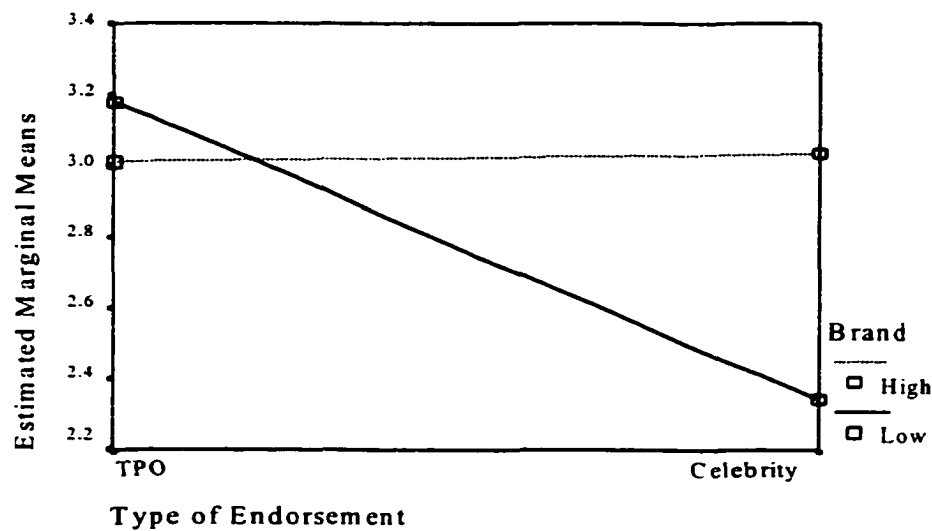
<sup>b</sup> F-value

<sup>c</sup> Effect Size

\* indicates  $p < .05$

\*\* indicates  $p < .01$

credibility to 3.320 for brand, and effect sizes varied from .170 for credibility to .037 for brand. These significant multivariate main effects were generally supported by significant univariate effects for the two dependent variables. The only exception was ATTE not supporting the brand main effect. The  $R^2$  for the dependent variables in the MANOVA was as follows: IV (.196) and ATTE (.171).



**FIGURE 4.3**  
**BRAND BY ENDORSEMENT INTERACTION FOR PU**

Covariates in MANOVA. The measures of opinion seeking (OPSEEK) and involvement (INVOL) were included in the questionnaire as possible covariates in MANOVA. Unfortunately, the INVOL scale was poorly correlated with the dependent variables (see Table 4.2), precluding use as a covariate. However, the OPSEEK scale exhibited significant correlations with two of the four dependent variables in the product set, so it was included as a covariate. With OPSEEK included, there were significant main effects for all four independent variables (opinion seeking, credibility, brand, and

endorsement) in the design (see Table 4.5). As expected from the correlation table, the univariate support for the multivariate OPSEEK main effect came from PQ ( $F = 22.796$ ,  $p < .001$ ), PU ( $F = 6.740$ ,  $p = .010$ ), and somewhat from ATTM ( $F = 3.468$ ,  $p = .064$ ), but not PR ( $F = 1.450$ ,  $p = .230$ ).

**TABLE 4.4**  
**RESULTS OF MANOVA, ADVERTISEMENT SET OF VARIABLES,**  
**EXPERIMENT ONE, n=181**

Multivariate						Univariate	
Effect <sup>a</sup>	Wilks' $\lambda$	Effect Size	df	F-value	Sig.	IV	ATTE
C	.830	.170	2/172	17.579	.000	26.098 <sup>b***</sup> .131 <sup>c</sup>	18.431 <sup>**</sup> .096
B	.963	.037	2/172	3.320	.038	6.244 <sup>*</sup> .035	1.693 .010
E	.910	.090	2/172	8.488	.000	7.154 <sup>**</sup> .040	14.046 <sup>**</sup> .075
CxB	.993	.007	2/172	.635	.531	1.176 .007	.353 .002
CxE	.970	.030	2/172	2.674	.072	1.243 .007	2.768 .016
BxE	.997	.003	2/172	.291	.748	.581 .003	.069 .000
CxBxE	1.000	.000	2/172	.034	.966	.001 .000	.066 .000

<sup>a</sup> Credibility (C), Brand (B), Endorsement (E).

<sup>b</sup> F-value

<sup>c</sup> Effect size

\* indicates  $p < .05$

\*\* indicates  $p < .01$

**TABLE 4.5**  
**RESULTS OF MANOVA, PRODUCT SET OF VARIABLES,**  
**WITH OPSEEK AS COVARIATE, EXPERIMENT ONE, n = 181**

Effect <sup>a</sup>	Wilks' $\lambda$	Effect Size	df	F-value	Significance
OPSEEK	.875	.125	4/169	6.060	.000
C	.794	.206	4/169	10.940	.000
B	.794	.206	4/169	10.945	.000
E	.770	.230	4/169	12.598	.000
CxB	.952	.048	4/169	2.114	.081
CxE	.976	.024	4/169	1.040	.388
BxE	.942	.058	4/169	2.602	.038
CxBxE	.980	.020	4/169	.856	.492

<sup>a</sup>Opinion Seeking (OPSEEK), Credibility (C), Brand (B), and Endorsement (E)

Because the OPSEEK main effect and increase in the endorsement main effect appeared to come at the expense of the brand main effect, a Kendall's tau-c correlation was computed for OPSEEK and the brand independent variable. Ideally, covariates should be correlated with the dependent variables and not correlated with the independent variables. As expected, the correlation between brand and OPSEEK was negative (-.127) and marginally significant ( $p = .065$ ). This suggests that OPSEEK may not satisfy the criteria for use as a covariate. Inclusion of OPSEEK as a covariate in MANOVA for the advertisement set of dependent variables was ineffective ( $F = 1.428$ ,  $p = .243$  for the main effect).

Additional reasons against using OPSEEK and INVOL as covariates arise from the frequency distribution of these variables. For example, 55% of respondents (127 of 229) had an OPSEEK scale score (the average of four individual scales) of 7.00 on a

possible 1 to 7 scale. This is a highly skewed distribution. Similarly, for INVOL, 43% of subjects (99 of 229) had a scale score (the average of five individual items) of 7.00 on a possible 1 to 7 scale. Mean scores for OPSEEK and INVOL were, respectively, 6.34 and 6.31. Given the lack of mean centering, the highly skewed distributions, the lack of correlation with the dependent variables (INVOL) or correlation with an independent variable (OPSEEK), these two covariates do not appear appropriate for further consideration.

Cell Means and Group Comparisons. Means for all 10 cells in the experimental design are shown in Table 4.6. Cell means are post-hoc compared against each other by Student-Newman-Keuls tests. These tests allow multiple means comparisons among groups while controlling the overall error rate at a specified level. Data is also presented in the format of groups/levels within a single factor for credibility (Table 4.7), brand (Table 4.8), and endorsement (Table 4.9).

Test of Hypothesis H1. This hypothesis proposed that subjects exposed to a credible TPO endorsement for a brand will show higher scores on measures of PQ, PU, ATTM, IV, and lower scores on PR than subjects exposed to either a credible celebrity endorsement or a no-endorsement ad for the same brand. To test this hypothesis, a grouping variable was created to bring together cells 1 and 3 (credible TPO endorsement cells), cells 5 and 7 (credible celebrity endorsement cells), and cells 9 and 10 (no-endorsement cells). The cell numbering system is as indicated in Table 4.6. These three groups were then compared using oneway ANOVA for each dependent variable and Student-Newman-Keuls tests to determine significant differences among groups.



**TABLE 4.6**  
**CELL MEANS, STANDARD DEVIATIONS, AND UNIVARIATE CONTRASTS: EXERIMENT ONE**

TPO Endorsement					Celebrity Endorsement				No Endorsement		Significant Mean Differences Among Cells <sup>a</sup>
High Brand			Low Brand		High Brand		Low Brand		H. Brand	L. Brand	
Dep. Var.	High Credib	Low Credib	High Credib	Low Credib	High Credib	Low Credib	High Credib	Low Credib	No Credibility Manipulation		
	n=20 Cell #1	n=22 Cell #2	n=21 Cell #3	n=25 Cell #4	n=22 Cell #5	n=25 Cell #6	n=23 Cell #7	n=23 Cell #8	n=24 Cell #9	n=24 Cell #10	
PQ	5.26 <sup>b</sup> .90 <sup>c</sup>	4.67 1.37	5.29 1.21	4.16 1.26	4.51 .91	4.13 .99	3.96 1.13	2.65 1.03	3.68 .99	3.25 .86	8 < 9,7,6,4 < 1,3
PU	3.54 .76	2.49 .96	3.49 .93	2.87 1.16	3.18 1.01	2.89 .92	2.63 1.14	2.05 .86	2.58 1.03	2.36 .90	8,10,2,9,7 < 3,1
ATTM	4.89 .95	4.10 1.85	4.23 .80	2.99 1.06	4.64 1.13	4.01 1.02	3.46 1.24	2.47 1.11	4.60 .87	2.96 .93	8,10,4 < 6,2,3,9,5,1
PR	2.71 1.08	3.34 1.39	2.71 .82	3.86 1.32	2.89 1.04	3.34 1.05	3.39 1.11	3.96 1.22	3.09 1.05	3.94 .96	1,3,5 < 4,10,8
IV	4.75 1.14	4.18 1.54	4.62 1.31	3.64 1.18	4.59 .90	3.60 1.30	4.17 1.46	2.75 1.43	3.53 1.36	3.32 1.51	8,10 < 5,3,1
ATTE	5.13 1.54	3.93 1.49	4.98 1.29	3.64 1.24	3.98 1.59	3.60 1.38	3.83 1.35	3.09 1.49	N/A	N/A	8,6,4,7,2,5 < 3,1

Column headings are the combination of elements appearing in the ad stimuli for the cells

<sup>a</sup> Significant differences are Student-Newman-Keuls tests at  $p=.05$  or less.

<sup>b</sup> Mean

<sup>c</sup> Standard Deviation

**TABLE 4.7**  
**FACTOR-LEVEL GROUP COMPARISONS FOR CREDIBILITY,**  
**EXPERIMENT ONE**

	No Credibility Manipulation (NC) n=48	Low Credibility Manipulation (LC) n=95	High Credibility Manipulation (HC) n=86	Significance <sup>a</sup>
PQ	3.46 .94	3.91 1.37	4.73 1.18	NC < LC < HC
PU	2.47 .97	2.59 1.03	3.19 1.03	NC, LC < HC
ATTM	3.78 1.22	3.39 1.44	4.28 1.17	LC, NC < HC
PR	3.52 1.08	3.63 1.26	2.94 1.04	HC < NC, LC
IV	3.42 1.43	3.54 1.43	4.52 1.22	NC, LC < HC
ATTE	N/A	3.56 1.41	4.45 1.54	LC < HC

<sup>a</sup> Significant differences between groups are Student-Newman-Keuls tests at  $p=.05$  or less, except for ATTE which is a t-test comparison between two groups.

**TABLE 4.8**  
**FACTOR-LEVEL GROUP COMPARISONS FOR BRAND,**  
**EXPERIMENT ONE**

	Low Brand (LB) n=116	High Brand (HB) n=113	Significance <sup>a</sup>
PQ	3.84 <sup>b</sup> 1.39 <sup>c</sup>	4.41 1.16	LB < HB
PU	2.67 1.09	2.92 1.00	None
ATTM	3.19 1.17	4.43 1.24	LB < HB
PR	3.59 1.18	3.09 1.13	HB < LB
IV	3.68 1.50	4.09 1.35	LB < HB
ATTE	n=92 3.85 1.49	n=89 4.12 1.58	None

<sup>a</sup> Significant differences between groups are t-tests at  $p=.05$  or less.

<sup>b</sup> Mean

<sup>c</sup> Standard Deviation

**TABLE 4.9**  
**FACTOR-LEVEL GROUP COMPARISONS FOR ENDORSEMENT,**  
**EXPERIMENT ONE**

	No Endorsement (NE) n=48	Celebrity Endorsement (C) n=93	TPO Endorsement (TPO) n=88	Significance <sup>a</sup>
PQ	3.46 <sup>b</sup> .94 <sup>c</sup>	3.81 1.22	4.81 1.28	NE, C < TPO
PU	2.47 .97	2.69 1.05	3.07 1.05	NE, C < TPO
ATTM	3.78 1.22	3.64 1.36	3.99 1.41	None
PR	3.52 1.08	3.40 1.15	3.19 1.26	None
IV	3.42 1.43	3.77 1.45	4.26 1.36	NE, C < TPO
ATTE	N/A	3.62 1.47	4.37 1.51	C < TPO

<sup>a</sup>Significant differences between groups are Student-Newman-Keuls tests at  $p=.05$  or less, except for ATTE which is a t-test between two groups.

<sup>b</sup>Mean

<sup>c</sup>Standard deviation

For the three endorsement groups compared, the dependent variables and the respective ANOVA F-values were as follows: PQ (35.429), PU (12.463), ATTM (4.847), PR (6.499), and IV (11.623). All of these F-values are significant at  $p < .01$ . Group means and significant differences among groups are shown in Table 4.10. Hypothesis 1 was fully supported for PQ, PU, ATTM, and PR and partially supported for IV. That is, we see an ascending series of means going from no endorsement, to credible celebrity endorsement, to credible TPO endorsement for PQ, PU, ATTM, and IV. Except for IV, the means of the credible TPO endorsement condition are significantly greater than either of the other two conditions. For PR, there is a

decreasing series of means across the conditions, as hypothesized, with the mean of the credible TPO condition being significantly less than either of the other two conditions.

**Test of Hypothesis H2a.** This hypothesis stated that subjects exposed to a highly credible TPO endorsement for a brand will show higher scores on measures of IV and ATTE than will subjects exposed to a TPO endorsement of low credibility for the same brand. Again, following a procedure similar to that in hypothesis 1, a grouping variable was created to bring together cells 1 and 3 (high credibility TPO endorsement cells) and cells 2 and 4 (low credibility TPO endorsement cells). The means of these two groups were then compared by t-test for IV and ATTE. As shown in Table 4.11, means for the high credibility condition are significantly greater than the means for the low credibility condition for both IV ( $t = 2.833$ ,  $p = .006$ ) and ATTE ( $t = 4.309$ ,  $p < .001$ ). Thus, hypothesis 2a is fully supported.

**Test of Hypothesis H2b.** This hypothesis proposed that subjects exposed to a highly credible TPO endorsement will show higher scores on measures of PQ, PU, ATTM, and lower scores on PR than subjects exposed to a TPO endorsement of low credibility for the same brand. This is really just an extension of H2a to cover the product set of variables. Accordingly, the same cells are being compared and the same grouping variable may be used. As shown in Table 4.11, means for the two groups on the four product variables are all significantly different by t-test, and the difference is in the direction hypothesized. Specific comparisons are as follows: PQ ( $t = 3.424$ ,  $p = .001$ ), PU ( $t = 3.945$ ,  $p < .001$ ), ATTM ( $t = 3.700$ ,  $p < .001$ ), and PR ( $t = -3.562$ ,  $p = .001$ ). Thus, hypothesis 2b is supported in all respects.

Test of Hypothesis H2c. This hypothesis stated that subjects exposed to an ad containing a TPO endorsement of low credibility will show lower scores on measures of PQ, PU, and ATTM than subjects exposed to a similar ad for the same brand not containing an endorsement. This is the so-called "boomerang" hypothesis. A grouping variable was created to bring together cells 2 and 4 (low credibility TPO endorsement cells) and cells 9 and 10 (no-endorsement cells). Means for the two groups were then

**TABLE 4.10**  
**TEST OF HYPOTHESIS 1: EXPERIMENT ONE**

	No Endorsement Manipulation (NE) n=48	Credible Celebrity Endorsement (CC) n=45	Credible TPO Endorsement (CTP) n=41	Significance <sup>a</sup>
PQ	3.46 <sup>b</sup> .94 <sup>c</sup>	4.23 1.06	5.28 1.06	NE < CC < CTP
PU	2.47 .97	2.90 1.10	3.51 .84	NE < CC < CTP
ATTM	3.78 1.22	4.03 1.32	4.55 .93	NE, CC < CTP
PR	3.52 1.08	3.15 1.09	2.71 .94	CTP < CC, NE
IV	3.42 1.43	4.38 1.22	4.68 1.22	NE < CC, CTP

<sup>a</sup> Significant differences between groups are Student-Newman-Keuls tests at p=.05 or less

<sup>b</sup> Mean

<sup>c</sup> Standard Deviation

compared by t-test. As shown in Table 4.12, this hypothesis was not supported for any of the three variables. That is, the means for the low credibility TPO endorsement condition were never significantly less than those for the control (no-endorsement) condition. For PQ, the means were significantly different ( $t = 3.983$ ,  $p < .001$ ), but in the opposite direction to that hypothesized. That is, the low credibility TPO endorsement condition had a mean for PQ (4.39) that was significantly greater than the

**TABLE 4.11**  
**TEST OF HYPOTHESES 2A AND 2B, EXPERIMENT ONE**

	Low Credibility TPO Endorsement (LCTP) n=47	High Credibility TPO Endorsement (HCTP) n=41	Significance <sup>a</sup>
PQ	4.39 <sup>b</sup> 1.32 <sup>c</sup>	5.28 1.06	LCTP < HCTP
PU	2.69 1.07	3.51 .84	LCTP < HCTP
ATTM	3.51 1.57	4.55 .93	LCTP < HCTP
PR	3.62 1.36	2.71 .94	HCTP < LCTP
IV	3.89 1.37	4.68 1.22	LCTP < HCTP
ATTE	3.78 1.36	5.05 1.41	LCTP < HCTP

<sup>a</sup> Significant differences between groups are t-tests at  $p=.05$  or less

<sup>b</sup> Mean

<sup>c</sup> Standard Deviation

mean for the no-endorsement condition (3.46). For PU, ATTM, and PR, the group comparison t-values were all less than 1.04, and p-values were all greater than .300. Of the three variables, only ATTM exhibited a mean difference in the hypothesized direction; however, this difference was not significant. Thus, hypothesis 2c is not supported.

Test of Hypothesis H3. This hypothesis proposed that subjects exposed to an ad for a high image brand will show higher scores on measures of PQ, PU, and ATTM, and lower scores on PR than subjects exposed to an ad for a low image brand. In brief, a main effect for brand image is proposed. Comparison of brand level means by t-test revealed significant differences for PQ, ATTM, and PR, all in the direction hypothesized (Table 4.13). The results of specific comparisons were: PQ ( $t = 3.395$ ,

$p = .001$ ), ATTM ( $t = 7.750$ ,  $p < .001$ ), and PR ( $t = -3.291$ ,  $p = .001$ ). The uniqueness variable did not show a significant difference ( $t = 1.797$ ,  $p = .074$ ), although the means for the high and low image groups (2.918 and 2.668, respectively) were in the hypothesized direction. Thus, hypothesis 3 is partially supported.

**Test of Hypothesis H4.** This hypothesis stated that subjects exposed to a credible endorsement for a brand will show higher scores on measures of PQ, PU, and ATTM, and lower scores on measures of PR than subjects exposed to an endorsement for the same brand with low credibility. In brief, a main effect for credibility is proposed. A

**TABLE 4.12**  
**TEST OF HYPOTHESIS 2C: EXPERIMENT ONE**

	No Endorsement Manipulation (NE) n=48	Low Credibility TPO Endorsement (LCTP) n=47	Significance <sup>a</sup>
PQ	3.46 <sup>b</sup> .91 <sup>c</sup>	4.39 1.32	NE < LCTP
PU	2.47 .97	2.69 1.07	None
ATTM	3.78 1.22	3.51 1.57	None

<sup>a</sup>Significant differences between groups are t-tests at  $p = .05$  or less

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

grouping variable was created to bring together cells 1, 3, 5, and 7 (high credibility endorsement cells) and 2, 4, 6, and 8 (low credibility endorsement cells). Comparison of these two groups by t-test (Table 4.14) revealed that means for the high credibility condition were significantly greater than means for the low credibility condition for PQ ( $t = 4.325$ ,  $p < .001$ ), PU ( $t = 3.940$ ,  $p < .001$ ), and ATTM ( $t = 4.525$ ,  $p < .001$ ). For PR, the mean for the low credibility condition was significantly greater than the mean for

**TABLE 4.13**  
**TEST OF HYPOTHESIS 3: EXPERIMENT ONE**

	Low Image Brand (LB) n=116	High Brand Image (HB) n=113	Significance <sup>a</sup>
PQ	3.84 <sup>b</sup> 1.39 <sup>c</sup>	4.41 1.16	LB < HB
PU	2.67 1.09	2.92 1.00	None
ATTM	3.19 1.18	4.43 1.24	LB < HB
PR	3.59 1.18	3.09 1.13	HB < LB

<sup>a</sup>Significant differences between groups are t-tests at p=.05 or less

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

the high credibility condition ( $t = -3.960$ ,  $p < .001$ ). Thus, hypothesis 4 is fully supported in all respects.

**TABLE 4.14**  
**TEST OF HYPOTHESIS 4: EXPERIMENT ONE**

	Low Credibility Endorsements (LC) n=95	High Credibility Endorsements (HC) n=86	Significance <sup>a</sup>
PQ	3.91 <sup>b</sup> 1.37 <sup>c</sup>	4.73 1.18	LC < HC
PU	2.59 1.03	3.19 1.03	LC < HC
ATTM	3.39 1.44	4.28 1.17	LC < HC
PR	3.63 1.26	2.94 1.04	HC < LC

<sup>a</sup>Significant differences between groups are t-tests at p=.05 or less

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

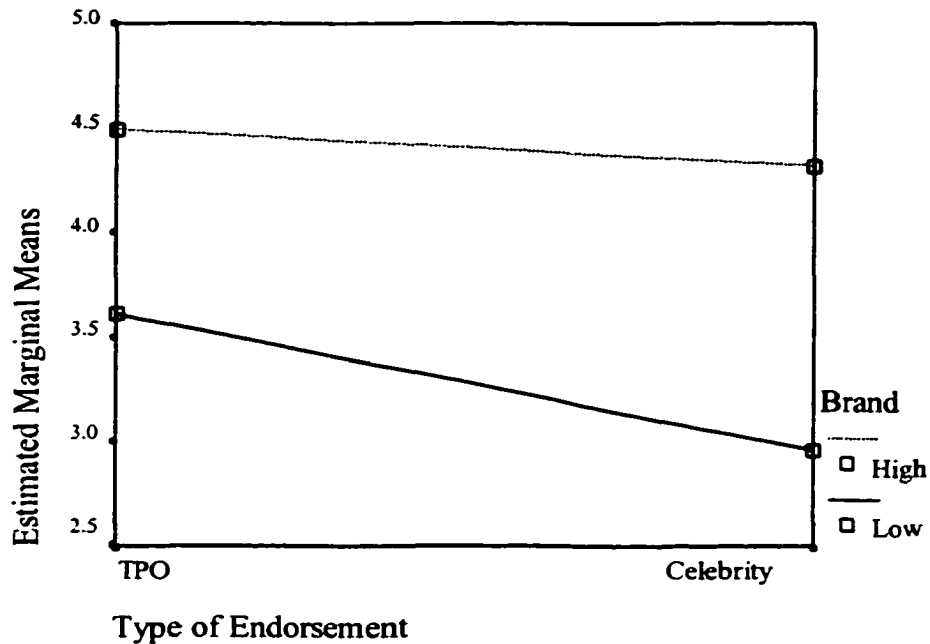
Test of Hypothesis H5. This hypothesis proposed that endorsement cue will interact with brand cue such that the increase in mean response, going from celebrity endorsement to TPO endorsement, on the dependent variables of PQ, PU, and ATTM



will be greater for low image than high image brands. This brand by endorsement interaction has already been discussed, briefly, in preparation for MANOVA. Since the multivariate B x E interaction was significant ( $F=2.464$ ,  $p = .047$ ), any question of disordinality had to be addressed prior to interpreting the main effects in MANOVA. The interaction was supported by the variables of PQ ( $F = 5.505$ ,  $p = .020$ ) and PU ( $F = 8.647$ ,  $p = .004$ ), but not ATTM ( $F = 1.810$ ,  $p = .180$ ). Graphs of the PQ and PU interactions have already been shown (see Figures 4.2 and 4.3), and the disordinal features of Figure 4.3 have been addressed.

In looking at Figure 4.2 for PQ, the means at the TPO and celebrity endorsement ends of the low brand image line appear to be very different (a mean difference of 1.375,  $t = 5.063$ ,  $p < .001$ ). The means at the two ends of the high image brand line are closer together (a mean difference of .6439,  $t = 2.776$ ,  $p < .005$ ). This difference in mean differences gives rise to the different slopes of the lines and a visual portrayal of the interaction. In Figure 4.3 for PU, the means at the TPO and celebrity ends of the low image brand line appear very different (a mean difference of .809,  $t = 3.639$ ,  $p < .001$ ). In contrast, the two means at the end of the high image brand line are very similar (a mean difference of .035,  $t = .035$ ,  $p > .500$ ). The difference in the slopes of the two lines is very apparent in Figure 4.3. Consistent in both Figures is the fact that the slope of the line for the low image brand is steeper than that of the high image brand. This suggests that improvement in PQ and PU following TPO endorsement stimulus (relative to celebrity endorsement stimulus) is greater for low image brands than high image brands.

A graph of means for the remaining third variable mentioned in the hypothesis (ATTM), is shown in Figure 4.4. It is an ordinal interaction. Unlike the other two variables, ATTM did not exhibit univariate support for the interaction ( $F = 1.810$ ,  $p = .180$ ). Overall, hypothesis 5 is partially supported.

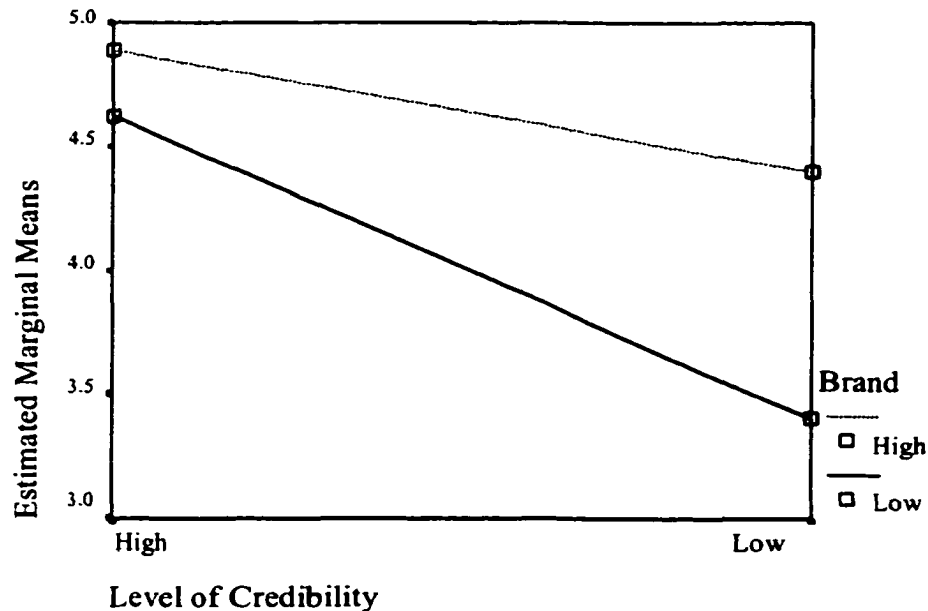


**FIGURE 4.4**  
**BRAND BY ENDORSEMENT INTERACTION FOR ATTM**

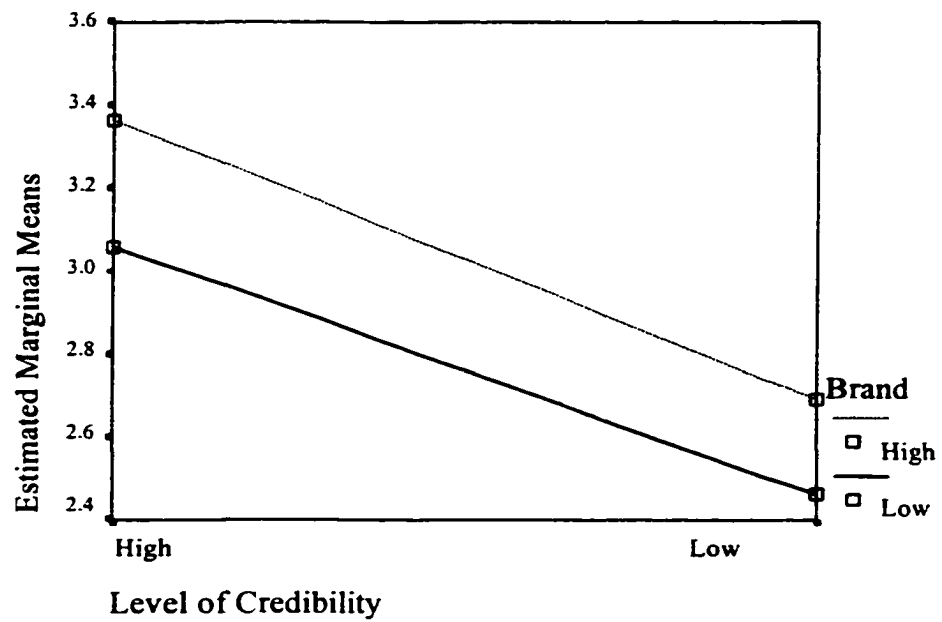
Test of Hypothesis H6. This hypothesis stated that source credibility cue will interact with brand image such that the increase in mean response going from low credibility to high credibility on the dependent variables of PQ, PU, and ATTM will be greater for low image brands than high image brands. This interaction was insignificant in a multivariate sense ( $F = 1.978$ ,  $p = .100$ ). Of the three variables mentioned in the hypothesis, only PQ ( $F = 4.895$ ,  $p = .028$ ) exhibited significant univariate support for

the interaction. Neither PU ( $F = .063$ ,  $p = .802$ ) nor ATTM ( $F = 1.331$ ,  $p = .250$ ) contributed significantly.

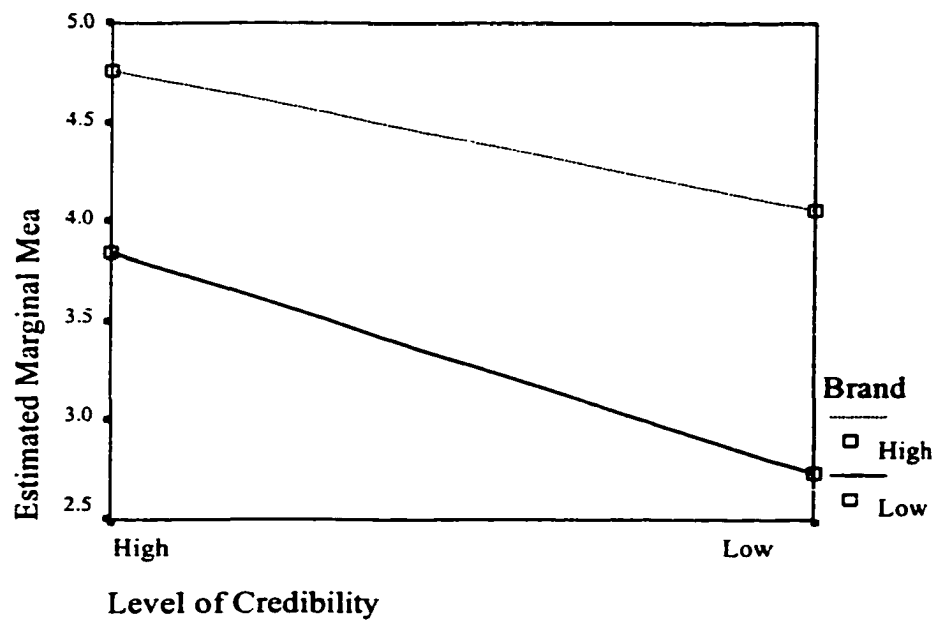
Graphical representations of the interactions for PQ, PU, and ATTM are shown in Figures 4.5, 4.6, and 4.7, respectively. All of the graphs indicate ordinal interactions. In looking at Figure 4.5 for PQ, the high and low credibility means at the two ends of the low image brand line appear very different (a mean difference of 1.159,  $t = 4.102$ ,  $p < .001$ ). The slope of the high image brand line is flatter, and as expected, the difference between the two means at the ends of this line is not as large (a mean difference of .486,  $t = 2.104$ ,  $p < .025$ ). The interpretation is that the high credibility condition raises product PQ more for the low image brand than the high image brand. Overall, hypothesis 6 is partially supported.



**FIGURE 4.5**  
**CREDIBILITY BY BRAND INTERACTION FOR PQ**



**FIGURE 4.6**  
**CREDIBILITY BY BRAND INTERACTION FOR PU**



**FIGURE 4.7**  
**CREDIBILITY BY BRAND INTERACTION FOR ATTMM**

## **Experiment Two**

This experiment studied the advertising effects of TPO and celebrity endorsements (and the moderating factors of brand and credibility on these endorsements) on subject perceptions of auto insurance. This product is a pure service, quite unlike the tangible good used in Experiment One (a desktop computer). The experimental design and dependent variables remain the same as in Experiment One.

**Sample Size and Endorsement Manipulation Check.** All 263 questionnaire folders distributed were returned. However, 18 respondents missed the endorsement manipulation check (meaning they were unable to recall from memory and categorize the endorsement condition they were exposed to). An additional 8 folders were deleted after consent form information indicated that these same subjects had responded in two separate data gathering sessions (double responders). For all double responders, the first response was retained and the second response was discarded. With these 26 questionnaires deleted from further analysis, data from 237 questionnaires were entered and this constituted the final sample (53.6% female, 46.4% male). Each of the 10 experimental cells contained data from a minimum of 20 to a maximum of 27 respondents. About 61% of subjects (144 of 237) reported having an auto insurance policy in their name. Also, 35% of those who had their own insurance indicated that they had actively chosen the insurance company rather than blindly followed the choice of their parents, a family member, or a friend.

**Brand Image Manipulation Check.** A separate survey item asked the respondent's perception of the image of the brand in the ad before exposure to the ad. Image was defined in the questionnaire as the degree to which the subject would consider purchase

of the brand and recommend it to others. Successful brand image manipulation requires that respondents report a higher intent to purchase and recommend the high image brand compared to the low image brand. As evidence of successful manipulation, brand image means for subjects exposed to the high and low brands were, respectively, 4.47 and 3.18. These two groups are significantly different on the brand image variable ( $t = 6.662, p < .001$ ).

Credibility Manipulation Check. Credibility manipulation for experiment two was similar to that of experiment one. That is, the advertisement disclosed that the endorser of the auto insurance would profit from making the endorsement (low credibility) or that the endorser stood to gain nothing by making the endorsement (high credibility). Credibility perception was checked by a series of four questionnaire items that asked about the sincerity, believability, truthfulness, and honesty of the ad/advertiser. From the manipulation check, the means of the high and low credibility groups were, respectively, 4.77 and 4.21. The two groups are significantly different in credibility perception ( $t = 3.142, p < .005$ ).

As in experiment one, inspection of crosstabulation results comparing mirror image cells (cells having the same brand and endorsement conditions and differing only in credibility manipulation) revealed that some subjects had clearly interpreted the low credibility condition to be highly credible and vice-versa. The explanation for this occurrence is uncertain. It is possible that the act of disclosure of the relationship between the endorser and the manufacturer could serve as a basis for inferring honesty, in the minds of some people. An attempt was made to minimize this possibility through the use of questionnaire instructions that told respondents to assume that the advertiser

is required by law to disclose the relationship between any endorser of the product and the advertiser. Nevertheless, some subjects perceived the manipulation in a manner opposite to that intended. Therefore, respondents were re-classified into high and low credibility conditions on the basis of their response to the four credibility check items rather than the ad stimulus they were exposed to. Re-classification only occurred between mirror-image cells (as defined above). Since credibility was not manipulated in the control cells, subject re-classification into or out of these cells did not occur. After re-classification, the mean difference between the two credibility groups widened (means of 5.48 and 3.42, respectively), and the t-test for the difference between the means was more significant ( $t = 19.135$ ,  $p < .001$ ).

Preliminary Analysis. To screen for missing data and out-of-range data entries (e.g. an entry of 33 instead of 3 on a 1 to 7 scale), descriptive statistics on all 33 individual scale items were obtained. The number of observations and minimum and maximum suggested an absence of obvious input errors for all variables.

Scales. To assess unidimensionality, the 33 individual scale items were entered into exploratory factor analysis with principal components extraction. Since there was a priori reason to expect 8 factors underlying the 33 items, 8 factors were requested with varimax rotation. The Bartlett test of sphericity was high ( $p < .001$ ) suggesting that factor analysis may be appropriate for the variables as a group. Additionally, the lowest measure of sampling adequacy for any one variable was .743, well above the recommended minimum of .50.

Inspection of the rotated component matrix showed a relatively simple structure (scale items associated with only a single factor) except for two problematic variables.

Item E1 from the ATTM scale crossloaded on the PQ scale (loadings of .643 and .448, respectively), and item G1 from the PU scale also crossloaded on the PQ scale (loadings of .656 and .438, respectively). No other items had crossloadings above .400. All 33 items had communalities above .500. Despite their lack of ideal structure, items E1 and G1 were both retained.

Reliability coefficients and number of items per scale for the 8 scales in Experiment Two are shown in Table 4.15. Reliabilities ranged from a low of .8569 for perceived uniqueness to .9561 for involvement with the product class. Pearson correlations among the scales are shown in Table 4.16. Note that the correlation between perceived risk and other variables is negative, and that OPSEEK and INVOL are poorly correlated to the other variables.

Results of tests for normality of distribution (Kolmogorov-Smirnov tests) are also shown in Table 4.15. Significant departures from normality were found for PQ, PR, OPSEEK, and INVOL. However, it is clear that these variables fall into two groups: moderate departure from normality (PQ and PR) and severe departure (OPSEEK and INVOL). The significance of the Kolmogorov-Smirnov Z-value for the latter variables was less than .001, indicating highly non-normal distributions. The OPSEEK and INVOL scales will be addressed in a later section, but the highly atypical distributions of these variables argues against their use. Any non-normality in the distributions of the remaining variables is deemed to be within acceptable limits.

Preparation for MANOVA. The MANOVA procedure assumes multivariate normality of linear combinations of dependent variables; however, there is no readily available statistical test for this condition. As an alternative, the dependent variables of



**TABLE 4.15**  
**MEASUREMENT SCALES: EXPERIMENT TWO**

Scale <sup>a</sup>	n	Items	Coefficient Alpha	K-S Test Significance <sup>b</sup>
PQ	237	4	.8844	.035
PU	237	4	.8569	.073
ATTM	237	4	.9000	.258
PR	237	4	.8678	.034
IV	237	4	.8671	.113
ATTE	193 <sup>c</sup>	4	.9258	.184
OPSEEK	237	4	.9298	.000
INVOL	237	5	.9561	.000

<sup>a</sup>Scale abbreviations are as follows: perceived quality (PQ), perceived uniqueness (PU), attitude toward the manufacturer (ATTM), purchase risk (PR), information value (IV), attitude toward the endorser (ATTE), opinion seeking (OPSEEK), and involvement with product class (INVOL)

<sup>b</sup>Kolmogorov-Smirnov Test for normality of distribution

<sup>c</sup>Control cells were not exposed to ad stimuli containing an endorsement

PQ, PU, and ATTM may be regressed upon PR and a scatterplot of the standardized residuals versus the predicted risk value may be visually evaluated for evidence of violation of assumptions. The dispersion of residuals should be random, with an absence of curvilinear patterns or clustering. So, as a diagnostic procedure, PQ, PU, and ATTM were regressed upon PR using the enter method. A similar diagnostic was not generated for the advertisement set of variables because there would only be one independent variable.

Examination of the residual scatterplot (standardized residuals versus predicted risk) revealed an essentially null plot (see Figure 4.8). That is, there was a generally random

dispersion of residuals and an absence of curvilinear patterns. Only 4 of 193 cases had standardized residuals outside 2.5 standardized deviations from the mean. Given the small number of outliers and the possible attendant criticism of overfitting the data if they were deleted, a decision was made to retain these cases.

**TABLE 4.16**  
**CORRELATION AMONG DEPENDENT VARIABLES: EXPERIMENT TWO**

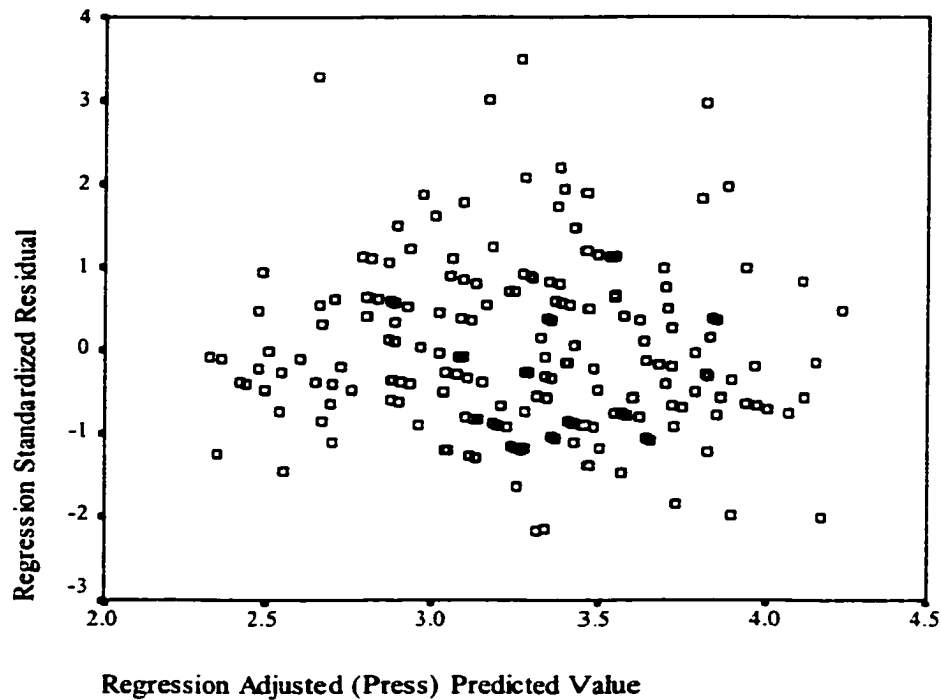
	PQ	PU	ATTM	PR	IV	ATTE	OPSEEK
PU	.449 <sup>a</sup> .000 <sup>b</sup>						
ATTM	.555 .000	.626 .000					
PR	-.300 .000	-.137 .057	-.322 .000				
IV	.598 .000	.400 .000	.612 .000	-.285 .000			
ATTE	.408 .000	.455 .000	.551 .000	-.269 .000	.502 .000		
OPSEEK	.149 .038	.026 .724	.112 .120	-.013 .862	.096 .183	-.027 .705	
INVOL	.112 .119	.103 .153	.110 .129	-.142 .050	.049 .498	.157 .029	.166 .021

<sup>a</sup>Pearson correlation coefficient

<sup>b</sup>two-tailed significance

MANOVAs. Separate MANOVAs were performed, one for the product set of dependent variables (PQ, PU, ATTM, and PR), and one for the advertisement set of dependent variables (IV and ATTE). In both cases, only the 8 cells in the full factorial portion of the experimental design (n = 193) were included in the analysis.

MANOVA for the Product Set of Variables. For the product set, Box's test was non-significant at  $p = .207$ , indicating equality of covariance matrices of the dependent variables across treatment groups. Additionally, Bartlett's test of sphericity was



**FIGURE 4.8**  
**EXAMINATION OF RESIDUALS FOR ASSUMPTIONS OF MANOVA**

significant at  $p < .001$ , suggesting an adequate level of correlation among the dependent measures. With these assumptions satisfied, attention was directed toward the multivariate results.

All four multivariate interactions were non-significant (F-values of 1.435 to .204, p-values of .224 to .936, see Table 4.17), allowing a direct interpretation of the main effects. The three independent variables (credibility, brand, endorsement) all exhibited significant main effects (Wilks'  $\lambda$ 's of .741 to .878, F-values of 15.877 to 6.300, p-values  $< .001$  for all). In almost all cases, the significant multivariate main effect was supported by a significant univariate effect for each of the four dependent variables. Only in the cases of PU and ATTM (both for endorsement) did univariate effects not

significantly support the multivariate main effect. The non-significance of the multivariate interactions was also true in a univariate sense; there were no significant univariate interaction effects (F-values from .001 to 3.084 and p-values from .975 to .081). The  $R^2$  for the four dependent variables in the MANOVA was as follows: PQ (.204), PU (.173), ATTM (.276), and PR (.180).

MANOVA for the Advertisement Set of Variables. A second MANOVA was performed for the advertisement set of dependent variables (IV and ATTE). These variables satisfied the assumptions of equality of covariance matrices across groups (Box's test  $p = .413$ ) and multicollinearity (Bartlett's test  $p < .001$ ). Of the four interactions, one (credibility by brand) was significant (Wilks'  $\lambda$  of .961,  $F = 3.739$ ,  $p = .026$ ), so this interaction had to be examined more completely before the main effects could be interpreted.

As shown in Table 4.18, the source of the multivariate C x B interaction appeared to be both IV ( $F = 5.087$ ,  $p = .025$ ) and ATTE ( $F = 5.243$ ,  $p = .023$ ). Graphical representation of these univariate interactions revealed that both were disordinal (see Figures 4.9 and 4.10). In looking at Figure 4.9, the difference in brand means on the high credibility side of the graph is .5433 ( $t = 2.175$ ,  $p < .05$ ) while the difference in brand means on the low credibility side of the graph (where the lines cross) is .1725 ( $t = .651$ , not significant). The latter mean difference insignificance suggests that the overall interaction is mostly due to the high credibility side of the graph, and that the disordinality on the low credibility side of the graph does not preclude interpretation of the main effects. The C x B interaction for ATTE represented in Figure 4.10 is very

**TABLE 4.17**  
**RESULTS OF MANOVA, PRODUCT SET OF VARIABLES, EXPERIMENT TWO, n=193**

Multivariate						Univariate			
Effect <sup>a</sup>	Wilks' $\lambda$	Effect Size	df	F-value	Sig	PQ	PU	ATTM	PR
C	.741	.259	4/182	15.877	.000	21.090 <sup>b**</sup> .102 <sup>c</sup>	21.707 <sup>**</sup> .105	58.869 <sup>**</sup> .241	12.075 <sup>**</sup> .061
B	.846	.154	4/182	8.312	.000	6.826* .036	11.568 <sup>**</sup> .059	6.744* .035	21.146 <sup>**</sup> .103
E	.878	.122	4/182	6.300	.000	20.565 <sup>**</sup> .100	.214 .001	3.699 .020	6.672* .035
CxB	.983	.017	4/182	.771	.546	.072 .000	2.548 .014	.927 .005	.308 .002
CxE	.996	.004	4/182	.204	.936	.121 .001	.036 .000	.698 .004	.008 .000
BxE	.975	.025	4/182	1.173	.324	.001 .000	1.259 .007	.817 .004	.075 .000
CxBxE	.969	.031	4/182	1.435	.224	.022 .000	3.084 .016	.285 .002	1.557 .008

<sup>a</sup> Credibility (C), Brand (B), Endorsement (E)

<sup>b</sup> F-value

<sup>c</sup> Effect Size

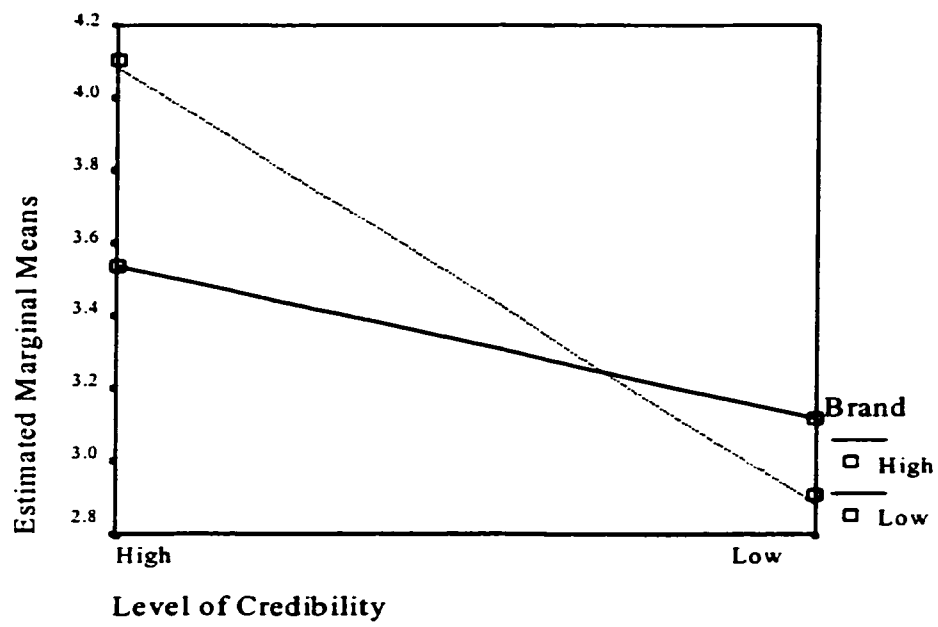
\* indicates  $p < .05$

\*\* indicates  $p < .01$

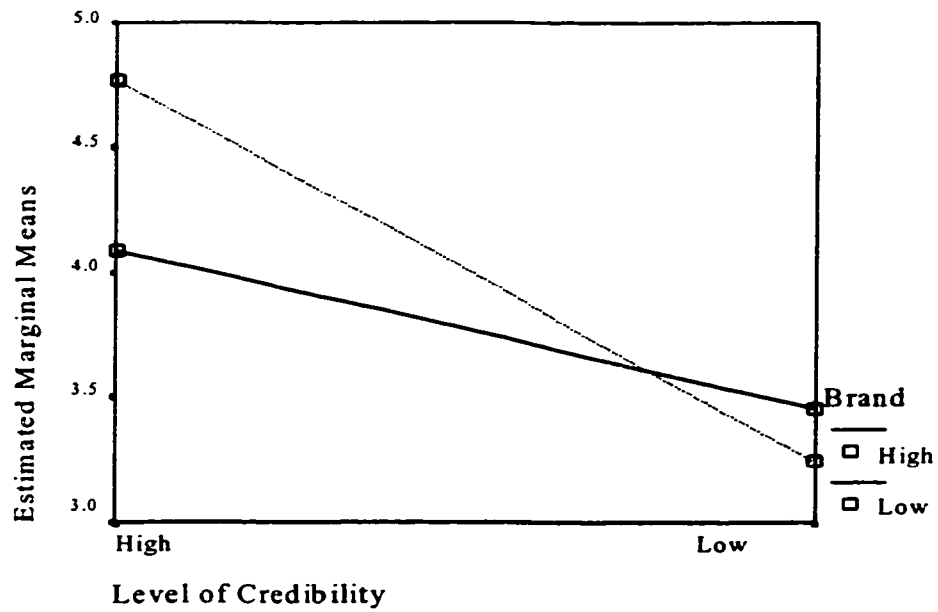
similar to the interaction just discussed. That is, the line cross occurs on the low credibility side of the graph, and the two brand means on that side are relatively close together. Indeed, the difference between means on the low credibility side of the graph is .1642 ( $t = .588$ , not significant) while the difference between means on the high credibility side of the graph is .6362 ( $t = 2.146$ ,  $p < .05$ ). As in Figure 4.9, this suggests that although a technical disordinality is present, the main effects can still be interpreted.

Of the three main effects, credibility (Wilks'  $\lambda$  of .829,  $F = 19.040$ ,  $p < .001$ ) and endorsement (Wilks'  $\lambda$  of .841,  $F = 17.398$ ,  $p < .001$ ) were both significant (see Table 4.18). Brand (Wilks'  $\lambda$  of .990,  $F = .898$ ,  $p = .409$ ) did not exhibit a significant main effect. The two significant multivariate main effects were both supported by significant univariate effects for both dependent variables (F-values from 19.343 to 30.223, p-values  $< .001$  for all four univariate effects). For brand, neither dependent variable had a significant univariate effect (F-values of 1.049 and 1.415, p-values  $> .235$  for both). The  $R^2$  for the two dependent variables in the MANOVA was as follows: IV (.234) and ATTE (.240).

Covariates in MANOVA. The measures of opinion seeking (OPSEEK) and involvement (INVOL) were included in the questionnaire as possible covariates in MANOVA. Unfortunately, neither scale was well correlated with either the product or advertisement set of dependent variables suggesting that the scales may not be suitable as covariates. For example, OPSEEK exhibits only one significant correlation among the four variables in the product set (PQ,  $p = .038$ ) and no significant correlations with



**FIGURE 4.9**  
**CREDIBILITY BY BRAND INTERACTION FOR IV**



**FIGURE 4.10**  
**CREDIBILITY BY BRAND INTERACTION FOR ATTE**

**TABLE 4.18**  
**RESULTS OF MANOVA, ADVERTISEMENT SET OF VARIABLES,**  
**EXPERIMENT TWO, n=193**

Multivariate						Univariate	
Effect <sup>a</sup>	Wilks' $\lambda$	Effect Size	df	F-value	Sig.	IV	ATTE
C	.829	.171	2/184	19.040	.000	21.997 <sup>b**</sup> .106 <sup>c</sup>	30.223 <sup>**</sup> .140
B	.990	.010	2/184	.898	.409	1.049 .006	1.415 .008
E	.841	.159	2/184	17.398	.000	28.228 <sup>**</sup> .132	19.343 <sup>**</sup> .095
CxB	.961	.039	2/184	3.739	.026	5.087* .027	5.243* .028
CxE	.995	.005	2/184	.438	.646	.069 .000	.872 .005
BxE	.996	.004	2/184	.335	.716	.536 .003	.005 .000
CxBxE	.968	.032	2/184	3.000	.052	.579 .003	3.540 .019

<sup>a</sup> Credibility (C), Brand (B), Endorsement (E).

<sup>b</sup> F-value

<sup>c</sup> Effect size

\* indicates  $p < .05$

\*\* indicates  $p < .01$

the two variables in the advertisement set. The INVOL variable is significantly correlated with one of the four product set variables (PR,  $p = .050$ ) and one of the two variables in the advertisement set (ATTE,  $p = .029$ ). It may be noted that OPSEEK and INVOL are significantly correlated ( $p = .021$ ) in Experiment Two while these two



variables were not correlated in Experiment One ( $p = .453$ ). Since INVOL was significantly correlated with one of the two advertisement variables, it was included as a covariate in MANOVA (Table 4.19).

**TABLE 4.19**  
**RESULTS OF MANOVA, ADVERTISEMENT SET OF VARIABLES,**  
**WITH INVOL AS COVARIATE, EXPERIMENT TWO,  $n = 193$**

Effect <sup>a</sup>	Wilks' $\lambda$	Effect Size	df	F-value	Significance
INVOL	.985	.015	2/183	1.399	.249
C	.834	.166	2/183	18.164	.000
B	.992	.008	2/183	.765	.467
E	.842	.158	2/183	17.125	.000
CxB	.961	.039	2/183	3.757	.025
CxE	.996	.004	2/183	.352	.704
BxE	.996	.004	2/183	.338	.714
CxBxE	.969	.031	2/183	2.928	.056

<sup>a</sup>Opinion Seeking (OPSEEK), Credibility (C), Brand (B), and Endorsement (E)

A comparison of MANOVAs before and after including INVOL as a covariate reveals very little difference in effect F-values (comparing Tables 4.18 and 4.19). Additionally, the  $R^2$  for IV did not change (it was .234 in both MANOVAs), while the explained variance of ATTE increased as a result of the covariate only from .240 to .250. In conclusion, the addition of INVOL as a covariate in the equation made little difference in the observed effects. Because of their lack of correlation with other dependent variables, highly skewed distributions, and demonstrated lack of effect (for INVOL on the advertisement set of variables), the variables of OPSEEK and INVOL do not appear appropriate for further consideration.

**Cell Means and Group Comparisons.** Means for all 10 cells in the experimental design are shown in Table 4.20. Cell means are post-hoc compared against each other by Student-Newman-Keuls tests. These tests allow multiple means comparisons while controlling overall error rate. Data is also presented in the format of groups/levels within a single factor for credibility (Table 4.21), brand (Table 4.22), and endorsement (Table 4.23).

**Test of Hypothesis H1.** This hypothesis proposed that subjects exposed to a credible TPO endorsement for a brand will show higher scores on measures of PQ, PU, ATTM, IV, and lower scores on PR than subjects exposed to either a credible celebrity endorsement or a no-endorsement ad for the same brand. To test this hypothesis, a grouping variable was created to bring together cells 1 and 3 (credible TPO endorsement cells), cells 5 and 7 (credible celebrity endorsement cells), and cells 9 and 10 (no-endorsement cells). The cell numbering system is as indicated in Table 4.20. These three groups were then compared using oneway ANOVA for each dependent variable and Student-Newman-Keuls tests to determine significant differences among groups.

For the three endorsement groups compared, the dependent variables and the respective ANOVA F-values and significance were as follows: PQ ( $F = 7.062$ ,  $p = .001$ ), PU ( $F = .799$ ,  $p = .452$ ), ATTM ( $F = 5.056$ ,  $p = .008$ ), PR ( $F = 1.444$ ,  $p = .239$ ), and IV ( $F = 10.320$ ,  $p < .001$ ). Group means and significant differences among groups are shown in Table 4.24. Hypothesis 1 was fully supported for PQ and IV, partially supported for ATTM, and not supported for PU or PR. That is, the PQ and IV levels of the credible TPO endorsement group was significantly greater than those of either the

**TABLE 4.20**  
**CELL MEANS, STANDARD DEVIATIONS, AND UNIVARIATE CONTRASTS: EXERIMENT TWO**

TPO Endorsement					Celebrity Endorsement				No Endorsement		Significant Mean Differences Among Cells <sup>a</sup>
High Brand			Low Brand		High Brand		Low Brand		H. Brand	L. Brand	
Dep. Var.	High Credib	Low Credib	High Credib	Low Credib	High Credib	Low Credib	High Credib	Low Credib	No Credibility Manipulation		
	n=22 Cell #1	n=25 Cell #2	n=25 Cell #3	n=20 Cell #4	n=26 Cell #5	n=24 Cell #6	n=27 Cell #7	n=24 Cell #8	n=21 Cell #9	n=23 Cell #10	
PQ	4.89 <sup>b</sup> .98 <sup>c</sup>	4.08 1.29	4.44 1.14	3.75 1.16	4.13 .93	3.47 .99	3.71 .99	3.08 .93	4.14 .89	3.77 1.42	8,6<3,1
PU	4.09 1.04	2.83 1.06	2.88 1.02	2.65 1.01	3.55 .97	2.89 1.08	3.22 1.30	2.51 .95	3.52 .90	2.80 1.39	8<9,5,1
ATTM	4.56 .81	3.03 1.03	4.07 1.09	3.00 1.09	4.19 1.01	3.08 .88	3.59 1.43	2.61 .91	3.82 1.15	3.25 1.21	8,4,2,6,10<3,5,1
PR	2.34 1.08	3.16 .80	3.27 1.22	3.54 .95	2.89 .81	3.30 .91	3.53 1.34	4.15 1.11	3.19 1.06	3.02 .99	1<8
IV	4.58 .77	3.47 1.24	4.02 1.19	3.43 1.35	3.63 1.20	2.34 1.21	3.06 1.38	2.81 1.04	3.36 1.27	2.98 1.64	6,8<3,1
ATTE	5.47 .94	3.39 1.32	4.43 1.44	3.99 1.32	4.07 1.52	3.09 1.54	3.74 1.52	2.93 1.03	N/A	N/A	8,6<3<1

Column headings are the combination of elements appearing in the ad stimuli for the cells

<sup>a</sup> Significant differences are Student-Newman-Keuls tests at  $p=.05$  or less.

<sup>b</sup> Mean

<sup>c</sup> Standard Deviation

credible celebrity endorsement group or the no-endorsement group. For ATTM, the credible TPO group mean was significantly greater than that of the no-endorsement group but not the credible celebrity group. Thus, hypothesis 1 is partially supported for ATTM. There were no significant differences among the three groups for PU or PR, although the group means were in the hypothesized direction.

**TABLE 4.21**  
**FACTOR-LEVEL GROUP COMPARISONS FOR CREDIBILITY,**  
**EXPERIMENT TWO**

	No Credibility Manipulation (NC) n=44	Low Credibility Manipulation (LC) n=100	High Credibility Manipulation (HC) n=93	Significance <sup>a</sup>
PQ	3.95 1.19	3.59 1.15	4.27 1.08	LC < HC
PU	3.15 1.22	2.72 1.02	3.41 1.16	LC < NC, HC
ATTM	3.52 1.21	2.93 .98	4.08 1.16	LC < NC < HC
PR	3.10 1.02	3.53 1.01	3.04 1.19	HC, NC < LC
IV	3.16 1.47	3.00 1.28	3.78 1.28	LC, NC < HC
ATTE	N/A	3.32 1.35	4.38 1.51	LC < HC

<sup>a</sup> Significant differences between groups are Student-Newman-Keuls tests at  $p=.05$  or less, except for ATTE which is a t-test comparison between two groups.

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

Test of Hypothesis H2a. This hypothesis stated that subjects exposed to a highly credible TPO endorsement for a brand will show higher scores on measures of IV and ATTE than subjects exposed to a TPO endorsement of low credibility for the same brand. To test this proposal, grouping variable was created to bring together cells 1 and 3 (high credibility TPO endorsement cells) and cells 2 and 4 (low credibility TPO endorsement cells). The means of these two groups were then compared by t-test (see

**TABLE 4.22**  
**FACTOR-LEVEL GROUP COMPARISONS FOR BRAND,**  
**EXPERIMENT TWO**

	Low Brand (LB) n=119	High Brand (HB) n=118	Significance <sup>a</sup>
PQ	3.76 <sup>b</sup> 1.19 <sup>c</sup>	4.13 1.11	LB < HB
PU	2.83 1.16	3.36 1.10	LB < HB
ATTM	3.33 1.26	3.72 1.14	LB < HB
PR	3.50 1.19	2.98 .97	HB < LB
IV	3.26 1.38	3.46 1.34	None
ATTE	n=96 3.77 1.44	n=97 3.97 1.61	None

<sup>a</sup>Significant differences between groups are t-tests at  $p=.05$  or less.

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

Table 4.25). The mean difference between the two groups on IV (.8319) was significant ( $p = .001$ ), and the mean difference for ATTE (1.2593) was also significant ( $p < .001$ ).

For both variables, the high credibility group had significantly higher scores than the low credibility group. Thus, hypothesis 2a is fully supported.

Test of Hypothesis H2b. This hypothesis proposed that subjects exposed to a highly credible TPO endorsement will show higher scores on measures of PQ, PU, ATTM, and lower scores on PR than subjects exposed to a TPO endorsement of low credibility for the same brand. This is really just an extension of H2a to cover the product set of variables. Accordingly, the same cells are being compared and the same grouping variable may be used. As shown in Table 4.25, means for the two groups on the four product variables are all significantly different by t-test, and the difference is in the

**TABLE 4.23**  
**FACTOR-LEVEL GROUP COMPARISONS FOR ENDORSEMENT,**  
**EXPERIMENT TWO**

	No Endorsement (NE) n=44	Celebrity Endorsement (C) n=101	TPO Endorsement (TPO) n=92	Significance <sup>a</sup>
PQ	3.95 <sup>b</sup> 1.19 <sup>c</sup>	3.61 1.02	4.30 1.21	C < TPO
PU	3.15 1.22	3.06 1.14	3.11 1.16	None
ATTM	3.52 1.21	3.39 1.22	3.67 1.20	None
PR	3.10 1.02	3.46 1.14	3.07 1.10	None
IV	3.16 1.47	2.98 1.29	3.88 1.23	C, NE < TPO
ATTE	N/A	3.48 1.48	4.29 1.47	C < TPO

<sup>a</sup>Significant differences between groups are Student-Newman-Keuls tests at  $p=.05$  or less, except for ATTE which is a t-test between two groups.

<sup>b</sup>Mean

<sup>c</sup>Standard deviation

direction hypothesized. Specific comparisons are as follows: PQ ( $t = 2.984$ ,  $p = .004$ ), PU ( $t = 2.997$ ,  $p = .004$ ), ATTM ( $t = 6.027$ ,  $p < .001$ ), and PR ( $t = -2.177$ ,  $p = .032$ ).

Thus, hypothesis 2b was fully supported.

Test of Hypothesis H2c. This hypothesis stated that subjects exposed to an ad containing a TPO endorsement of low credibility will show lower scores on measures of PQ, PU, and ATTM than subjects exposed to a similar ad for the same brand not containing an endorsement. This is the so-called 'boomerang' hypothesis. A grouping variable was created to bring together cells 2 and 4 (low credibility TPO endorsement cells) and cells 9 and 10 (no-endorsement cells). Means for the two groups were then

**TABLE 4.24**  
**TEST OF HYPOTHESIS 1: EXPERIMENT TWO**

	No Endorsement Manipulation (NE) n=44	Credible Celebrity Endorsement (CC) n=53	Credible TPO Endorsement (CTP) n=47	Significance <sup>a</sup>
PQ	3.95 <sup>b</sup> 1.19 <sup>c</sup>	3.92 .97	4.65 1.08	CC,NE < CTP
PU	3.15 1.22	3.38 1.15	3.45 1.19	None
ATTM	3.52 1.21	3.89 1.27	4.29 .99	NE < CTP
PR	3.10 1.02	3.22 1.15	2.84 1.24	None
IV	3.16 1.47	3.33 1.32	4.28 1.04	NE,CC < CTP

<sup>a</sup> Significant differences between groups are Student-Newman-Keuls tests at p=.05 or less

<sup>b</sup> Mean

<sup>c</sup> Standard Deviation

**TABLE 4.25**  
**TEST OF HYPOTHESES 2A AND 2B, EXPERIMENT TWO**

	Low Credibility TPO Endorsement (LCTP) n=45	High Credibility TPO Endorsement (HCTP) n=47	Significance <sup>a</sup>
PQ	3.93 <sup>b</sup> 1.23 <sup>c</sup>	4.65 1.08	LCTP < HCTP
PU	2.75 1.03	3.45 1.19	LCTP < HCTP
ATTM	3.02 1.05	4.29 .99	LCTP < HCTP
PR	3.33 .88	2.84 1.24	HCTP < LCTP
IV	3.45 1.28	4.28 1.04	LCTP < HCTP
ATTE	3.66 1.34	4.91 1.33	LCTP < HCTP

<sup>a</sup> Significant differences between groups are t-tests at p=.05 or less

<sup>b</sup> Mean

<sup>c</sup> Standard Deviation

compared by t-test. As shown in Table 4.26, this hypothesis was supported for only one of the three variables. That is, the means for the low credibility TPO endorsement condition were only significantly less than those for the control (no-endorsement) condition for ATTM. For both PQ and PU, the means were in the hypothesized direction, but the difference was not significant. The specific comparisons are as follows: PQ ( $t = -.060$ ,  $p = .952$ ), PU ( $t = -1.658$ ,  $p = .101$ ), and ATTM ( $t = -2.114$ ,  $p = .037$ ). Overall, hypothesis 2c is partially supported.

**TABLE 4.26**  
**TEST OF HYPOTHESIS 2C: EXPERIMENT TWO**

	No Endorsement Manipulation (NE) n=44	Low Credibility TPO Endorsement (LCTP) n=45	Significance <sup>a</sup>
PQ	3.95 <sup>b</sup> 1.19 <sup>c</sup>	3.93 1.23	None
PU	3.15 1.22	2.75 1.03	None
ATTM	3.52 1.21	3.02 1.05	LCTP < NE

<sup>a</sup>Significant differences between groups are t-tests at  $p \leq .05$  or less

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

Test of Hypothesis H3. This hypothesis proposed that subjects exposed to an ad for a high image brand will show higher scores on measures of PQ, PU, and ATTM, and lower scores on PR than subjects exposed to an ad for a low image brand. That is, a main effect for brand image is proposed. Comparison of brand level means by t-test revealed significant differences for PQ, PU, ATTM, and PR, all in the direction hypothesized (see Table 4.27). The results of specific comparisons were: PQ ( $t = 2.503$ ,  $p = .013$ ), PU ( $t = 3.592$ ,  $p < .001$ ), ATTM ( $t = 2.519$ ,  $p = .012$ ), and PR ( $t = -3.681$ ,  $p < .001$ ). Thus, hypothesis 3 is fully supported.



**TABLE 4.27**  
**TEST OF HYPOTHESIS 3: EXPERIMENT TWO**

	Low Image Brand (LB) n=119	High Brand Image (HB) n=118	Significance <sup>a</sup>
PQ	3.76 <sup>b</sup> 1.19 <sup>c</sup>	4.13 1.11	LB < HB
PU	2.83 1.16	3.36 1.10	LB < HB
ATTM	3.33 1.26	3.72 1.14	LB < HB
PR	3.50 1.19	2.98 .97	HB < LB

<sup>a</sup>Significant differences between groups are t-tests at  $p=.05$  or less

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

Test of Hypothesis H4. This hypothesis stated that subjects exposed to a credible endorsement for a brand will show higher scores on measures of PQ, PU, and ATTM, and lower scores on measures of PR than subjects exposed to an endorsement for the same brand with low credibility. In brief, a main effect for credibility is proposed. A grouping variable was created to bring together cells 1, 3, 5, and 7 (high credibility endorsement cells) and 2, 4, 6, and 8 (low credibility endorsement cells). Comparison of these two groups by t-test (Table 4.28) revealed that means for the high credibility condition were significantly greater than means for the low credibility condition for PQ ( $t = 4.177, p < .001$ ), PU ( $t = 4.360, p < .001$ ), and ATTM ( $t = 7.416, p < .001$ ). For PR, the mean for the low credibility condition was significantly greater than the mean for the high credibility condition ( $t = -3.078, p = .002$ ). Thus, hypothesis 4 is fully supported in all respects.

Test of Hypothesis H5. This hypothesis proposed that endorsement cue will interact with brand cue such that the increase in mean response, going from celebrity

**TABLE 4.28**  
**TEST OF HYPOTHESIS 4: EXPERIMENT TWO**

	Low Credibility Endorsements (LC) n=93	High Credibility Endorsements (HC) n=100	Significance <sup>a</sup>
PQ	3.59 <sup>b</sup> 1.15 <sup>c</sup>	4.27 1.08	LC < HC
PU	2.73 1.02	3.41 1.16	LC < HC
ATTM	2.93 .98	4.08 1.16	LC < HC
PR	3.53 1.01	3.04 1.19	HC < LC

<sup>a</sup>Significant differences between groups are t-tests at  $p=.05$  or less

<sup>b</sup>Mean

<sup>c</sup>Standard Deviation

endorsement to TPO endorsement, on the dependent variables of PQ, PU, and ATTM will be greater for low image than high image brands. As noted in the earlier section on MANOVA for the product set of variables, the multivariate brand (B) by endorsement (E) interaction was not significant ( $F = 1.173$ ,  $p = .324$ ). Tests of a B x E interaction for the univariate elements revealed the following: PQ ( $F = .001$ ,  $p = .975$ ), PU ( $F = 1.259$ ,  $p = .263$ ), and ATTM ( $F = .817$ ,  $p = .594$ ). Thus, there is no support for hypothesis H5; none of the three univariate interactions are significant.

Test of Hypothesis H6. This hypothesis stated that source credibility cue will interact with brand image such that the increase in mean response going from low credibility to high credibility on the dependent variables of PQ, PU, and ATTM will be greater for low image brands than high image brands. As noted in the section for MANOVA of the product set of variables, the multivariate credibility (C) by brand interaction was not significant ( $F = .771$ ,  $p = .546$ ). Tests of a C x B interaction for the univariate elements revealed the following: PQ ( $F = .072$ ,  $p = .789$ ), PU ( $F = 2.548$ ,

$p = .112$ ), and ATTM ( $F = .927$ ,  $p = .337$ ). None of these three interactions are significant and, thus, there is no support for hypothesis H6.

## **CHAPTER FIVE: DISCUSSION**

This chapter will begin by discussing each experiment separately, then the results of the two experiments will be compared. Subsequent sections compare the present findings to past literature on TPO endorsement, and address the limitations of this investigation, the managerial implications of the results, and future directions for research on TPO endorsements in advertising.

### **Experiment One**

This experiment studied the advertising effects of TPO and celebrity endorsements (and the moderating factors of brand and credibility on these endorsements) on subject perceptions of a personal computer. The dependent variables included perceived product quality (PQ), perceived product uniqueness (PU), attitude toward the manufacturer (ATTM), and perceived risk of purchase (PR, in aggregate, the product set of variables), and ad (information) value (IV) and attitude toward the endorser (ATTE, together, the advertisement set of variables). Each set of variables was analyzed separately in MANOVA. The independent variables of brand and credibility were pre-tested to determine high and low levels of brand image and credibility, respectively. It was expected that opposing levels of these independent variables may have different influences on the dependent variables, so the subsequent finding of main effects for these variables was not surprising. The focus of the experiment was the main effect of endorsement as an independent variable and any interactions endorsement may have with brand image and credibility.

The Endorsement Factor. The results of MANOVA for the product set of variables indicated a significant ( $p < .001$ ) multivariate main effect for endorsement (Table 4.3).

The magnitude of the main effect is moderate ( $\eta^2$  of .197), suggesting that the effect is significant in both a practical and statistical sense. By far, the largest univariate contributor to the multivariate effect size is PQ (univariate  $\eta^2$  of .184). Of the four product dependent variables, PQ had a univariate F-value five times larger than any other variable. Certainly, the contribution of PQ toward the endorsement main effect overshadows that of the other variables.

It may be noted that PR did not support the endorsement main effect, exhibiting a non-significant F-value and a meager  $\eta^2$  of .011. Theoretic arguments were advanced in Chapter Two suggesting that TPO endorsement should reduce purchase risk to a greater degree than other types of ads. Possibly, the non-significance of PR in the main effect is due to the collapse of credibility conditions which occurred during the analysis. That is, the main effect compares TPO endorsement cells to celebrity endorsement cells collapsed across all other conditions. Supporting this explanation, we find in the test of hypothesis 1 (Table 4.10) that the credible TPO endorsement condition has a significantly lower mean for PR than either the credible celebrity endorsement condition or the no endorsement condition. Thus, when the groups are separated by endorsement and credibility condition, the expected results are found. Further, the results imply that reduction of PR may not occur unless the ad is credible. The relationship between PR and credibility will be addressed later in this section.

The endorsement main effect compared only the two endorsement conditions (TPO and celebrity); the third condition (no-endorsement) is considered in Table 4.9. Here, we find a stair-step increase of means going from no-endorsement, to celebrity endorsement, to TPO endorsement, for PQ, PU and IV with the TPO endorsement cells

having significantly more favorable means than either the celebrity endorsement cells or the no-endorsement cells. This is additional evidence for the effectiveness of TPO endorsement compared to the other endorsement conditions. The means for PR among the three endorsement conditions in Table 4.9 are not significantly different. As discussed earlier, this is believed to be due to the collapse of credibility conditions across endorsement cells and the effect of advertisement credibility upon PR.

The results of MANOVA for the advertisement set of variables indicated a significant ( $p < .001$ ) multivariate main effect for endorsement (Table 4.4). The magnitude of the main effect is small ( $\eta^2 = .090$ ), however, suggesting that the effect may not have great practical meaning. Both dependent variables contributed to the effect. As noted earlier, credibility may be a necessary requirement for endorsement to have its full effect. This appears to make sense, because perceived low credibility would probably negate the positive effect of endorsement on information value and attitude toward the endorser. Appearing to support this, we find a marginally significant ( $p = .072$ ) multivariate credibility by endorsement interaction for the advertisement set of dependent variables.

The only significant multivariate interaction in Experiment One was a brand by endorsement interaction for the product variable group ( $p = .047$ ,  $\eta^2 = .055$ ). This interaction was supported by two of the four dependent variables, PQ and PU. Graphs of this interaction (Figures 4.2 and 4.3) show that the PQ and PU of the low image brand of personal computer increased to a greater degree than that of the high image brand, going from celebrity to TPO endorsement. This interaction had been proposed as hypothesis 5, and it was gratifying to see support for the interaction even when cells

were collapsed across credibility levels. The credibility by brand interaction (hypothesis 6) approached significance ( $p = .100$ ), but was not significant.

The basis for the brand by endorsement interaction hypothesis was the work of Wu and Shaffer (1987). These authors argued that consumers with direct versus indirect brand experience will differ in their susceptibility to a counterattitudinal message. That is, an attitude formed by direct experience is believed to be more clearly and confidently held than an attitude formed on the basis of hearsay. Within the context of this experiment, the classification of brands into high and low image may suggest that consumers would have less direct experience with the low image brand. This assumption is based on the rationale that a brand held in low regard is probably less likely to be purchased. Lacking direct experience with the low image brand, consumers may review and favorably change their opinion of the brand upon endorsement of the brand. That is, viewers of an endorsement for the low image brand may perceive their existing opinion of the brand to be biased and undertake a review of their attitude (the process of judgement correction). If the endorsement is convincing and respondents can identify a reason why their attitude may have been biased (such as lack of direct experience with a brand) attitude correction may occur. Judgement correction is often extreme and in the opposite direction to the bias (Myers-Levy and Malaviya 1999). The results of the brand by endorsement interaction in MANOVA appear to support the attitude correction hypothesis.

The Brand Factor. The brand image variable exhibited a highly significant main effect for the product set of variables ( $p < .001$ ,  $\eta^2 = .217$ ). The effect size for brand image is the largest of the three independent variables in this experiment. The moderate

size of  $\eta^2$  suggests that brand image has practical as well as statistical significance.

Among the four dependent variables, brand image received the greatest support from ATTM ( $\eta^2 = .190$ ). The variables of PQ ( $\eta^2 = .076$ ) and PR ( $\eta^2 = .032$ ) also contributed to the brand image main effect, but the magnitude of their effects was overshadowed by that of ATTM. The PU variable did not exhibit a significant univariate support for the main effect. This suggests that, at least for the two brands/models being compared, product uniqueness was not a discriminating factor. It may be noted that endorsement, rather than brand image, elicited the largest effect from PQ of the three independent variables. This again suggests the effectiveness of endorsement in influencing consumer perceptions of products.

For the advertisement set of variables, brand image had a significant main effect ( $p = .038$ ). However, the  $\eta^2$  was a feeble .037. Of the two advertisement variables, only IV contributed significantly to the brand image effect ( $\eta^2 = .035$ ).

The brand image main effect may be better grasped by looking at Table 4.8 (comparison of the two brand image group means on the six dependent variables). The high image brand group has significantly more favorable scores than the low image brand group on all variables except PU and ATTE. However, the two brand image groups are collapsed across credibility and endorsement conditions, and this may have had the effect of clouding the influence of these factors on the brand image results. For example, cells 9 and 10 (see Table 4.6) indicate the baseline means in the presence of brand cue but absent endorsement and credibility manipulation. We see that the means are in the approximate center range of the 1 to 7 scale and that the high image brand has more favorable means than the low image brand. Conversely, in cells 1 and 3 (credible



TPO endorsement cells of high image brand and low image brand, respectively) we find that the low image brand has “caught up” with the high image brand. That is, the dependent variable means for cells 1 and 3 are very similar, suggesting that TPO endorsement has raised consumer perceptions of the low image brand to essentially equal those of the high image brand. This “catch up” cell comparison is less obvious for cell 5 and 7 (celebrity endorsement cells) and other cell pairings.

The “catch up” effect mentioned above is a demonstration of the effect of TPO endorsement as an advertising cue. In their article on signals of product quality, Dawar and Parker (1994) concluded that brand names have been found to be more important than price, physical appearance, or retailer reputation. The “catch up” phenomenon suggests that TPO endorsements (and this is probably most true for credible TPO endorsements) may counteract the negative influence of a powerful extrinsic cue (low brand image). That is, the presence of both cues may result in attitude toward the low image brand being enhanced to a much greater degree than attitude toward the high image brand. This finding may suggest a practical use for TPO endorsements in advertising products with low brand equity but high objective product quality.

The Credibility Factor. The credibility variable exhibited a highly significant main effect for the product set of variables ( $p < .001$ ,  $\eta^2 = .195$ ). This was not surprising. Opposing levels of credibility were expected to have different effects on at least some of the dependent variables. However, the credibility variable is remarkable for the fact that all six dependent variables significantly ( $p < .01$ ) supported its main effect. Indeed, credibility is the only one of the three independent variables (endorsement, brand, credibility) to receive such broad support.

The significance, effect size, and broad univariate support for the credibility main effect suggests that credibility exerts a fundamental influence over essentially all potential effects of the endorsement. This may be seen in Table 4.6 where adjacent cells (columns) have alternating high and low credibility classifications. We find a "sawtooth" pattern (alternating rise and fall) of dependent variable means going from column to column. The high credibility cells (columns) generally have more favorable means than the low credibility columns. Additional evidence for the credibility effect may be found in Table 4.7. Here, the three credibility conditions (high, low, and no credibility manipulation) are compared against each other. The high credibility condition occupies the significantly more favorable position for each dependent variable. Finally, a credibility main effect was proposed as hypothesis 4, and test of this hypothesis (Table 4.14) supported the proposition for all specified variables (PQ, PU, ATTM, and PR).

### **Experiment Two**

This experiment studied the advertising effects of TPO and celebrity endorsements (and the moderating factors of brand and credibility on these endorsements) on subject perceptions of auto insurance. This product is a pure service, quite unlike the tangible good used in Experiment One (a personal computer). The dependent variables included perceived product quality (PQ), perceived product uniqueness (PU), attitude toward the manufacturer (ATTM), and perceived risk of purchase (PR, in aggregate, the product set of variables), and ad (information) value (IV) and attitude toward the endorser (ATTE, together, the advertisement set of variables). Each set of variables was analyzed separately in MANOVA. The independent variables of brand and credibility

were pre-tested to determine high and low levels of brand image and credibility, respectively. It was expected that opposing levels of these independent variables may have different influences on the dependent variables, so the subsequent finding of main effects for these variables was not surprising. The focus of the experiment was the main effect of endorsement as an independent variable and any interactions endorsement may have with brand image and credibility.

The Endorsement Factor. The results of MANOVA for the product set of variables indicated a significant ( $p < .001$ ) multivariate main effect for endorsement (Table 4.17). The magnitude of the main effect is small to moderate ( $\eta^2$  of .122), and less than the comparable endorsement effect for personal computers ( $\eta^2$  of .197). Only two of four product dependent variables significantly supported the endorsement effect, PQ and PR. By far, the largest univariate contributor to the endorsement effect size is PQ, a pattern also found in Experiment One. However, unlike the results for personal computers, PR significantly supported the endorsement effect. It may be recalled that risk reduction was one of the hypothesized functions of TPO endorsement. As in Experiment One, however, the relationship between PR and the three independent variables was more pronounced for credibility and brand image than for endorsement. Although endorsement elicited the largest effect from PQ in Experiment One, this was not true in Experiment Two. Rather, credibility elicited the largest F-value from PQ (21.090) with endorsement close behind (20.565). Overall, MANOVA of the product set of variables suggests that endorsement had a weaker effect in Experiment Two than in Experiment One. Possible reasons for this weaker effect of endorsement will be addressed in a later section.

Additional evidence for the diminished effect of endorsement may be seen in Table 4.23 (endorsement group comparisons on the dependent variables). Of the six dependent variables, it is only for IV that the TPO endorsement group mean is significantly greater than that of the no-endorsement group mean. This is a very different result than when the endorsement groups in Experiment One were compared (Table 4.9). There, TPO endorsement group means for PQ, PU, and IV were all significantly greater than both the no-endorsement group and the celebrity endorsement group. The results suggest that TPO endorsement was less effective in Experiment Two than in Experiment One in enhancing respondent perceptions of product quality.

Endorsement also exhibited a significant main effect for the advertisement set of variables ( $p < .001$ ,  $\eta^2 = .159$ ). This is a larger effect size than in the first experiment ( $\eta^2 = .090$  there). This larger effect size is supported by both IV and ATTE, but the pattern is different (comparing Tables 4.24 and 4.4). In Experiment One, ATTE was the much larger contributor, but in Experiment Two, IV provides the most support (univariate  $\eta^2 = .132$ ). Indeed, of the three independent variables, endorsement elicited the largest F-value and effect size from IV. The results suggest some increased strength for endorsement among the advertisement set of variables in Experiment Two, but the results also show weaker effects for endorsement among the product variables in Experiment Two compared to Experiment One.

The Brand Factor. The brand image variable exhibited a highly significant main effect for the product set of variables ( $p < .001$ ,  $\eta^2 = .154$ ). The effect size for brand image in Experiment One was  $\eta^2 = .217$  (see Table 4.3), so the brand image effect is somewhat diminished in Experiment Two. Also, brand image went from having the

largest effect size of the three independent variables in Experiment One to having the second largest effect size in Experiment Two (Table 4.17). While effect sizes for the three factors were all relatively similar in Experiment One, credibility has a decidedly large effect size in Experiment Two, and the effect sizes of both brand and endorsement are diminished, relative to Experiment One.

Of the four dependent variables, the largest contributor to the brand image main effect is PR ( $\eta^2 = .103$ ). This pattern of dependent variable support is also different from Experiment One. There, PU did not support the main effect and the largest contributor was ATTM. In Experiment Two, all four variables significantly support the brand image main effect and the largest contributor is PR.

Hypothesis 3 proposed a main effect for brand image for PQ, PU, ATTM and PR. T-test of the means of high image and low image groups found significant differences for all four variables with the high brand image group occupying the more favorable position in each instance (Table 4.27). The product variable brand by endorsement interaction that was significant in Experiment One is not significant in Experiment Two.

For the advertisement set of variables, brand image had an insignificant main effect ( $p = .409$ ,  $\eta^2 = .010$ ). Of the two advertisement variables, neither IV nor ATTE significantly supported the main effect. However, the credibility by brand interaction was significant in MANOVA of the advertising variables ( $p = .026$ ,  $\eta^2 = .039$ ), receiving significant support from both IV and ATTE. Graphs of these interactions are shown in Figures 4.9 and 4.10; they indicate that the increase in mean response for IV and ATTE is greater for low image brands than high image brands. Although the interactions in both figures are disordinal, t-tests of the sets of means nearest the line

cross were not significant, suggesting that the effects may still be interpreted. In any event, the relatively small effect sizes (.027 for IV and .095 for ATTE) suggest that the interaction may not have much practical significance.

The Credibility Factor. The credibility variable exhibited a highly significant main effect for the product set of variables ( $p < .001$ ,  $\eta^2 = .259$ ). A significant effect was not unexpected. However, the credibility variable is remarkable for the fact that all six dependent variables significantly ( $p < .01$ ) supported its main effect (see Tables 4.17 and 4.18). Indeed, credibility is the only one of the three independent variables to receive such broad support in Experiment Two.

The credibility effect size ( $\eta^2 = .259$ ) is the largest of any independent variable in either of the two experiments. Although all four product variables significantly supported the credibility effect, the strongest contributor was ATTM (univariate  $\eta^2 = .241$ ). It may be noted that brand image received the strongest support from ATTM in Experiment One. Yet, in Experiment Two, the credibility the F-value for ATTM was 58.869 while the similar value for brand image was 6.744. The difference may suggest that the respondents were less familiar with auto insurance brand names (Experiment Two) than personal computer brand names (Experiment One) and relied on the credibility of the advertisement to make a brand judgement.

There was also a significant credibility main effect for the advertisement set of variables ( $p < .001$ ,  $\eta^2 = .171$ , see Table 4.25). Both IV and ATTE significantly supported the effect.

Additional evidence for the credibility effect may be seen in the comparison of credibility groups (high, low, and no credibility manipulation) in Table 4.21. Here, the

high credibility group has means that are significantly more favorable than those of the low credibility group for all variables. Further support for the credibility effect is seen in the Table 4.20 where adjacent cells (columns) have alternating high and low credibility classifications. We find a "sawtooth" pattern (alternating rise and fall) of dependent variable means going from column to column. The high credibility cells (columns) generally have more favorable means than the low credibility columns. Finally, a credibility main effect was proposed as hypothesis 4, and test of this hypothesis (Table 4.28) supported the proposition for all specified variables (PQ, PU, ATTM, and PR).

### **Comparison of the Two Experiments**

The Product Factor. The reader may question why the two data sets (Experiments One and Two) were not merged so that the product factor (personal computer versus auto insurance) could be examined in MANOVA (i.e., a 2 X 2 X 2 X 2 design). The rationale against such analysis is that a problem of interpretability arises. For example, both the products and the advertising claims used in TPO endorsements for the two experiments are different. The personal computer TPO endorsement claimed that the machine had been rated number one (of 11 comparable brands/models tested) in overall performance based on speed, convenience, upgradability, and reliability. The auto insurance TPO endorsement claimed that the company had been rated number one (of 26 different auto insurance companies) in claims satisfaction based on the claims experience of 32,000 policyholders. One claim is objective (a machine test) based on specified criteria, while the other is more subjective. If product type were to have a main effect in MANOVA, would this be due to the fact that one product is a pure

service and the other a tangible good, or because the advertising claims for the two are different? Even if the advertising claims were constructed to be similar, the two products were not equated for risk and other factors that would allow one to say that a difference between the two is due solely to the fact that one is a service and the other a tangible good.

Intrinsic cues would also confound the interpretation of a product factor. The advertisement for the personal computer included four intrinsic cues (clock speed of central processor, transfer speed of modem, size of RAM memory, and size of hard disk). The concept of intrinsic cues does not transfer well to an ad for a pure service such as auto insurance; thus, the insurance ads did not contain equivalent cues. Again, any product effect that might be found is confounded by an inability to determine which of multiple conditions may have led to the effect. Given these problems, the product factor was not explored at this time.

It may be noted that a brand by endorsement interaction was present in Experiment One but not Experiment Two. That is, TPO endorsement was able to increase respondent perception of a low brand image desktop computer to a significantly greater degree (compared to celebrity endorsement) than the perception of a high brand image computer was increased, and this interaction was not apparent when the product was auto insurance. It is unclear why TPO endorsement of a low image brand would differ for the two products. Possible reasons for the difference include: a) TPO endorsement has a differential effect on the products (tangible good versus a service), b) the claims used in the TPO endorsements were different and this impacted their effectiveness, c) the cues used in the ads were different (absence of intrinsic cues for auto insurance) and



this affected the results, and d) the respondent's familiarity with the two product categories was different and this moderated the effectiveness of the TPO endorsement. A combination of the four reasons may be the most likely explanation. As noted above, the claim for computers appeared to be more "objective" and the claim for auto insurance could be perceived as "subjective". Respondents may have been more skeptical of the later claim. Also, respondents may have been familiar with computers and able to interpret the intrinsic cues appearing in the computer ads as quality signals. No similar signals appeared in the ads for auto insurance. Thus, the two ads may have had different informational value to the respondents. Lacking adequate information, the respondents to the auto insurance ads may have "discounted" the perceived quality of the insurance to adjust for the lack of information.

Appearing to support the lack of information rationale, a comparison of tests of hypothesis 1 in Experiment One (Table 4.10) and Experiment Two (Table 4.24) finds the means for IV (the closest variable to a measure of skepticism) to be lower in Experiment Two than Experiment One for all three endorsement conditions (TPO, celebrity, and no-endorsement). In general, comparable means for the same dependent variable are lower in Experiment One (Table 4.10) than Experiment Two (Table 4.24).

Endorsement and the Other Factors. Of the three independent variables, credibility probably has the largest combined effect size (main effect) across both sets of dependent variables for the two experiments (.195 + .170 + .259 + .171). This compares to brand image (.217 + .037 + .154 + .010) and endorsement (.197 + .090 + .122 + .159). Brand image had a relatively diminished effect on the advertisement set of variables in each experiment. Based on theory, however, it is surprising that

endorsement does not have a greater effect, especially in the second experiment. Recall that TPO endorsements used in both experiments were constructed to communicate experience/credence characteristics of products to consumers prior to purchase. Such information should reduce the risk of purchase. For services, especially, consumers are believed to rely on experience properties to evaluate quality (Parasuraman, Zeithaml, and Berry 1985). Given the large difference between TPO and celebrity endorsements in the amount of experience properties communicated, a larger main effect was perhaps expected.

Consistent in both experiments, the endorsement factor exhibited a significant ( $p < .001$ ) main effect for product and advertisements sets of variables. Test of hypothesis 1 (superiority of TPO endorsement over celebrity and the no-endorsement conditions) was at least partially supported for both experiments, although support was weaker in Experiment Two than Experiment One. Also, the B x E interaction found in Experiment One did not occur in Experiment Two. This may have been due to differences in the TPO endorsement (claim and presence of intrinsic cues) between the two experiments.

Examination of Table 4.6 suggests that TPO endorsement was most effective when the advertisement was highly credible and the brand was low image (cell 3). A comparison of cell 3 to cell 10 (low image brand control) indicates large favorable mean changes on all dependent variables (excluding ATTE which has no control). Indeed, the changes between cell 3 and cell 10 are larger than the changes between any other cell and its brand control. This may suggest a practical use for TPO endorsement when the advertisement is credible, an “objective” claim can be used together with intrinsic

cues, and the product is a low image brand. This suggestion is supported not only by the findings in the current study but also by the work of Wu and Shaffer (1987).

### **Comparison to Past TPO Endorsement Research**

It may be noted that the only prior research on the effects of TPO endorsement found entirely negative results (Peterson, Wilson, and Brown 1992). These authors operationalized their TPO as a fictional independent market research company and the endorsement was a statement that a fictional brand had been rated number one in overall satisfaction based on survey results. Six different goods/services were endorsed (shoe repair, mutual fund, health maintenance organization, insect spray, digital audio tape, and electric screwdriver). The TPO endorsements were compared to testimonial endorsements and ads containing no satisfaction information on measures of attitude toward the brand, attitude toward the manufacturer, attitude toward the ad, and purchase intention. Advertisements containing TPO endorsements were found to be no more effective than ads without TPO endorsements. However, a highly significant ( $p < .001$ ) difference was found in consumer responses to the various products.

There are interesting differences between the investigation described above and the present study. The largest difference is that TPO endorsements in this study were found to have a significant effect (compared to celebrity endorsements). The range of dependent variables in this study is a bit more broad and this may partially explain the discrepancy. However, there are further differences in that the TPO in this study (*Consumers' Digest*) was not fictional, the brands were from the real-world, and two different endorsement claims were used. The different results in the two studies may be due, in part, to these differences in operationalization of the investigations.

Because it used a satisfaction claim, Experiment Two of this study is probably most comparable to the investigation of Peterson, Wilson, and Brown. Although a significant endorsement effect was found in this experiment, the results were weaker than those of Experiment One (which used a performance claim). The negative findings of Peterson, Wilson, and Brown may be due to their use of a satisfaction claim and fictional TPO and brand names which could have left respondents questioning the credibility of the endorsement. Indeed, the magnitude of the credibility main effect in the current study suggests that credibility may have been an overlooked factor in the earlier investigation.

### **Limitations**

The conditions of this investigation were very artificial. For example, advertisement processing probably occurred under high-involvement, a state that would predispose the respondent to question the credibility of the endorsement. As evidence of this, we see in Tables 4.6 and 4.20 a “sawtooth” pattern of alternating high and low means in adjacent cells that differ only in credibility. The possible effects of low-involvement processing of TPO endorsement are unclear. An additional limitation is exclusion of other extrinsic quality cues (price, retailer name and location, warranty) from the advertising stimuli. Any or all of these cues may interact with the cues studied in this investigation. Also, the effects of repetitive viewing of the ad stimuli on attitude formation/change were not studied. Finally, the products chosen for investigation (desktop computers, auto insurance) are relatively expensive. TPO endorsement of inexpensive, frequently purchased products may have very different results. All of the above limit the conclusions that may be drawn from this study, and suggest that the findings may not generalize to other environments and populations.

The present study compared TPO endorsement (as an ad type) to celebrity endorsement (as an ad type). However, there are a number of other types of ads to which TPO endorsement could be compared, and the relative effectiveness of TPO endorsement within these comparisons remains unknown. If the effects of TPO endorsement are achieved through cognitive processing of the ad (which is probably true), then it would be especially interesting to compare TPO endorsement to an ad processed primarily by affect. Certainly, both types of ad processing occur and both may affect attitude toward the brand (Edell and Burke 1987; Burke and Edell 1989). Certain product classes may be evaluated more by affect than cognition (entertainment, food) and TPO endorsement may be relatively ineffective for these product classes. The inability to make a cognitive versus affective comparison is a limitation of the current study.

Probably the major limitation of this study (and a threat to the generalizability of the findings) is the use of a sample with relatively limited consumer experience. This lack of experience may predispose the sample to place greater reliance on quality cues in advertising than would a similar sample of more experienced consumers. Thus, experience may be an unobserved moderator of the TPO endorsement effect.

### **Managerial Implications**

The results suggest a practical usefulness for TPO endorsements. Consistent in both experiments, TPO endorsement of the product resulted in significantly greater perceived product quality and information value of the ad than did celebrity endorsement. This may suggest that for certain types of products, TPO endorsement may achieve specific marketing objectives better than celebrity endorsement.

There are caveats to the above recommendation. First, to achieve its full effect, the TPO endorsement should be credible. Credibility apparently decreases the negative attributions that viewers may make about the endorsement, resulting in more favorable perceptions of the product and the ad. The results of this study indicate that credibility also affects celebrity endorsements, and the magnitude of the effect appears to be about equal to the credibility effect on TPO endorsements. This is an interesting development, because going into the study it was believed that respondents would generally expect celebrity endorsers to be biased in their recommendations. That is, it was believed that subjects would discount the fact that celebrity endorsers were well compensated for their service. This appears not to be true.

The second caveat is that credible TPO endorsements appear to be most effective when they are promoting a brand with a low image. That is, the magnitude of perceptual enhancement due to TPO endorsement is greater for low image brands than high image brands. This may suggest that TPO endorsement would be most appropriate for a brand with low brand equity but high objective quality. The third caveat is that an “objective” TPO endorsement claim may perform better than a “subjective” claim. This conclusion is based on the stronger results achieved in Experiment One versus Experiment Two.

### **Future Directions for Research**

The results of this study raise a number of questions that may be addressed with future research. To start, this investigation only looked at TPO endorsement of products. It is possible that endorsement of companies might be a practical application of the TPO type of endorsement. For example, there are a number of start-up

companies in the internet industry that lack name awareness and brand image. These start-ups may wish to reach an audience of consumers or potential investors.

Endorsement of the start-up by a more well known technology company could help to achieve the goals of the smaller company. The larger company may be willing to endorse the smaller company because the two are linked through a vendor relationship or a technology-sharing alliance. In any event, the start-up may leverage the relationship to help achieve desired goals.

Second, the extrinsic quality cues of price, retailer reputation and location, and warranty may be investigated as potential moderators of the TPO endorsement – quality perception relationship. The current study found that brand (a well-recognized extrinsic cue) interacted with endorsement in Experiment One. It is possible that other extrinsic cues also moderate the endorsement effect. Third, TPO endorsement may be compared against other types of endorsements (expert, testimonial) and/or other types of ads (e.g., an ad processed through affect rather than cognition) for the ability to change respondent perception of the product. As an ad type, TPO endorsement is probably somewhat limited in the imagery that may be used. However, it is precisely these affective appeals that strongly influence attitude toward the ad, and indirectly, attitude toward the brand. From a communications standpoint, it would be interesting to compare the effects of ads processed primarily through cognition versus affect. Fourth, TPO endorsement may be tested for its ability to enhance perception of other types of products. That is, both products used in this study were relatively expensive, but had few hedonic consumption characteristics. TPO endorsement may perform very differently if the advertised product is inexpensive or if the product has strong affective

appeal. For example, food and entertainment are products that may have elicit strong emotions. In such cases, the consumer may have idiosyncratic tastes and be unwilling to follow a TPO recommendation.

### **Summary**

Third-party organization product endorsements in advertising are perceived by consumers as extrinsic quality cues, similar to the established quality cues of brand, price, retailer reputation, and warranty. To consumers, TPO endorsement is beneficial because it may communicate experience and credence properties of products prior to purchase. To marketers, TPO endorsement may be useful in positioning products against the competition.



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## **APPENDIX A: PRETEST ONE QUESTIONNAIRE**

## **CONSUMER SURVEY**

### **Consent Form**

This questionnaire will ask you to draw upon your experience as a consumer and respond to questions. There are no 'right' or 'wrong' answers, but please take the time to give us your honest opinion. Answering these questions should cause you no distress. Participation is voluntary and you may withdraw at any time. Individual responses will be totaled and reported in aggregate form – readers of the report will be unaware of your identity or your individual responses. However, you must sign your name to this consent form (indicating your voluntary participation in the study) and give your MKT 3401 section number to receive extra credit.

Student Name (signed) \_\_\_\_\_

Last Name (printed) \_\_\_\_\_

MKT 3401 section # \_\_\_\_\_  
or meeting time  
and instructor name

**Dwane Dean, Investigator  
Department of Marketing  
Louisiana State University  
3124 CEBA  
388-8417**



Several goods and services are listed below. For each good or service, please indicate: 1) your degree of familiarity with the product offerings in the marketplace for that particular good or service, 2) the range of quality among product offerings in the marketplace for that particular good or service (your best estimate), and 3) the risk (to you) of choosing the wrong brand of the particular good or service.

You may not be familiar with all categories; however, please do the best you can and do not leave any blanks. Note that 7 is the high end of the scale.

---

Familiarity Scale	1=not at all familiar	to	7=very familiar
Range of Quality Scale	1=very narrow range	to	7=very wide range
Risk of Choice Scale	1=very little risk	to	7=very high risk

---

	Familiarity	Range of Quality	Risk
personal computer			
digital camera			
pocket calculator (non-graphing)			
television set			
automobile insurance			
internet service			
credit card			
optometry service (exam + eyewear)			
cell phone service			
gym (fitness club) membership			
auto muffler replacement			

## **APPENDIX B: PRETEST TWO QUESTIONNAIRE**

## **CONSUMER SURVEY**

### **Consent Form**

This questionnaire will ask you to draw upon your experience as a consumer and respond to questions and statements. There are no 'right' or 'wrong' answers, but please take the time to give us your honest opinion. Answering these questions should cause you no distress. Participation is voluntary and you may withdraw at any time. Individual responses will be totaled and reported in aggregate form – readers of the report will be unaware of your identity or your individual responses. However, you must sign your name to this consent form (indicating your voluntary participation in the study) and give your MKT 3401 section number to receive extra credit.

Student Name (signed) \_\_\_\_\_

Last Name (printed) \_\_\_\_\_

MKT 3401 section # \_\_\_\_\_  
or meeting time and  
instructor name

**Dwane Dean, Investigator  
Department of Marketing  
Louisiana State University  
3124 CEBA  
388-8417**

**A. Several brands of desktop personal computer (PCs) are listed below. Please rate each brand on your perception of the brand's 'image'. Image is defined as your awareness of the brand, the degree to which you would consider buying one brand over others, and the degree to which you would recommend one brand over others. Note that 7 is the high (favorable) end of the scale.**

Dell	Very Low Image	1	2	3	4	5	6	7	Very High Image
E-Machines	Very Low Image	1	2	3	4	5	6	7	Very High Image
Hewlett-Packard	Very Low Image	1	2	3	4	5	6	7	Very High Image
IBM	Very Low Image	1	2	3	4	5	6	7	Very High Image
NEC	Very Low Image	1	2	3	4	5	6	7	Very High Image
Compaq	Very Low Image	1	2	3	4	5	6	7	Very High Image
Sony	Very Low Image	1	2	3	4	5	6	7	Very High Image
Acer	Very Low Image	1	2	3	4	5	6	7	Very High Image
Gateway	Very Low Image	1	2	3	4	5	6	7	Very High Image

**B. Several brands of auto insurance are listed below. Please rate each brand on your perception of the brand's 'image'. Image is defined as your awareness of the brand, the degree to which you would consider buying one brand over others, and the degree to which you would recommend one brand over others. Note that 7 is the high (favorable) end of the scale.**

Allstate	Very Low Image	1	2	3	4	5	6	7	Very High Image
Progressive	Very Low Image	1	2	3	4	5	6	7	Very High Image
Amer. National	Very Low Image	1	2	3	4	5	6	7	Very High Image
Shelter	Very Low Image	1	2	3	4	5	6	7	Very High Image
GEICO	Very Low Image	1	2	3	4	5	6	7	Very High Image
State Farm	Very Low Image	1	2	3	4	5	6	7	Very High Image
AAA (Triple A)	Very Low Image	1	2	3	4	5	6	7	Very High Image
Safeco	Very Low Image	1	2	3	4	5	6	7	Very High Image
American Eagle	Very Low Image	1	2	3	4	5	6	7	Very High Image
Kemper	Very Low Image	1	2	3	4	5	6	7	Very High Image

**C. Please read each scenario and respond by circling a number on the corresponding scale.**

Goods and services are sometimes subjected to analysis and review by organizations not affiliated with the manufacturer or service provider. These third-party organizations (TPOs) publish product ratings and rankings in their own magazines as a normal course of their business. The TPO may endorse one product as superior to others, and this endorsement may be incorporated into the manufacturer's advertising for the good or service. The value of the endorsement to the consumer would probably depend upon the credibility of the TPO making the endorsement.

Several 'descriptions' of TPOs are given below. After each description, please rate your perception of the "credibility" of the TPO. Credibility is defined as the expertise and trustworthiness of the TPO; that is, accurate knowledge and the ability to communicate that knowledge without bias.

#1 This non-profit consumer organization scientifically tests products, collects data from consumers using products and services, and employs experts to interpret the findings. The organization avoids any conflict of interest by refusing paid advertising or product donation, since the advertised or donated products could potentially be evaluated by the organization. This TPO has:

Very Low Credibility    1   2   3   4   5   6   7   Very High Credibility

#2 This for-profit organization scientifically tests products, collects data from consumers using products and services, and employs experts to interpret the findings. There is a conflict of interest, however, since the organization willingly accepts paid advertising and product donations from marketers of products the organization will evaluate. This TPO has:

Very Low Credibility    1   2   3   4   5   6   7   Very High Credibility

#3 This for-profit organization tests products and collects data from consumers through questionnaires by mail. The organization willingly accepts paid advertising and product donations from marketers of products to be evaluated. Additionally, the organization receives payments of an undisclosed amount from the National Association of Manufacturers to assist the organization in its "mission to inform the public" about goods and services. This TPO has:

Very Low Credibility    1   2   3   4   5   6   7   Very High Credibility

**D. Listed below are the names of several consumer publications. Please indicate your degree of familiarity with each publication.**

1. Consumer Reports magazine

Highly Unfamiliar    1   2   3   4   5   6   7    Highly Familiar

2. Consumer's Digest magazine

Highly Unfamiliar    1   2   3   4   5   6   7    Highly Familiar

3. Consumers' Research magazine

Highly Unfamiliar    1   2   3   4   5   6   7    Highly Familiar

4. Roper's Shopping Guide magazine

Highly Unfamiliar    1   2   3   4   5   6   7    Highly Familiar

5. Best's Product Review magazine

Highly Unfamiliar    1   2   3   4   5   6   7    Highly Familiar

**E. For each statement, please express your agreement or disagreement with the statement by circling the number that most closely matches your response. Do not skip any items.**

1. I would expect to see Consumer Reports magazine review various brands and models of personal computers and recommend one brand above all others.

Strongly Disagree    1   2   3   4   5   6   7    Strongly Agree

2. I would expect to see Consumer's Digest magazine review various brands and models of personal computers and recommend one brand above all others.

Strongly Disagree    1   2   3   4   5   6   7    Strongly Agree

3. I would expect to see Consumers' Review magazine review various brands and models of personal computers and recommend one brand above all others.

Strongly Disagree    1   2   3   4   5   6   7    Strongly Agree

4. I would expect to see Roper's Shopping Guide review various brands and models of personal computers and recommend one brand above all others.

Strongly Disagree    1   2   3   4   5   6   7    Strongly Agree

5. I would expect to see **Bests' Product Review** review various brands and models of personal computers and recommend one brand above all others.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

---

6. I would expect to see **Consumer Reports** magazine review various brands of automobile insurance policies and recommend one brand above all others.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

7. I would expect to see **Consumer's Digest** magazine review various brands of automobile insurance policies and recommend one brand above all others.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

8. I would expect to see **Consumers' Review** magazine review various brands of automobile insurance policies and recommend one brand above all others.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

9. I would expect to see **Roper's Shopping Guide** review various brands of automobile insurance policies and recommend one brand above all others.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

10. I would expect to see **Best's Product Review** review various brands of automobile insurance policies and recommend one brand above all others.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

END OF SURVEY - THANK YOU

## **APPENDIX C: PRETEST THREE QUESTIONNAIRE**



## ***ADVERTISING SURVEY***

### **Consent Form**

This questionnaire will ask you to draw upon your experience as a consumer and respond to statements and questions. There are no 'right' or 'wrong' answers, but please take the time to give us your honest opinion. Answering these questions should cause you no distress. Participation is voluntary and you may withdraw at any time. Individual responses will be totaled and reported in aggregate form - readers of the report will be unaware of your identity or your individual responses. However, to receive extra credit from your instructor, you must sign your name to this consent form (indicating your voluntary participation in the study).

Student Name (signed) \_\_\_\_\_

Last Name (printed) \_\_\_\_\_

Student ID # \_\_\_\_\_

Dwane Dean, Investigator  
Department of Marketing  
Louisiana State University  
3124 CEBA  
388-8417

A. The names of several celebrities are listed below. For each celebrity, please indicate your degree of familiarity with the celebrity (name recognition, face recall) by circling the number on the scale that most closely matches your response. Note that 7 is the favorable end of the scale.

Peter Jennings	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Tom Brokaw	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Dan Rather	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Barbara Walters	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Hugh Downs	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Mario Andretti	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Richard Petty	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Jay Leno	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Alex Trebek	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar
Evel Knevel	Very Unfamiliar	1	2	3	4	5	6	7	Very Familiar

B. If each celebrity listed below were to endorse a personal computer (PC) in an ad, would you find this convincing enough to consider purchase of the endorsed PC (if you needed a PC)? That is, to what degree would each celebrity's endorsement of a PC be persuasive in selling the PC? Please circle the number that most closely matches your response.

Peter Jennings	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Tom Brokaw	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Dan Rather	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Barbara Walters	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Hugh Downs	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Mario Andretti	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Richard Petty	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Jay Leno	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Alex Trebek	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Evel Knevel	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive

- C. If each celebrity listed below were to endorse an auto insurance company in an ad, would you find this convincing enough to consider purchase of the endorsed auto insurance (if you needed auto insurance)? That is, to what degree would each celebrity's endorsement of an insurance company be persuasive in selling the company's insurance? Please circle the number that most closely matches your response.

Peter Jennings	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Tom Brokaw	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Dan Rather	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Barbara Walters	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Hugh Downs	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Mario Andretti	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Richard Petty	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Jay Leno	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Alex Trebek	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive
Evel Knevel	Very Unpersuasive	1	2	3	4	5	6	7	Very Persuasive

- D. Can you think of any celebrities (not listed above) that would be very effective in selling a PC by endorsing the computer in an advertisement? If so, list the names below.

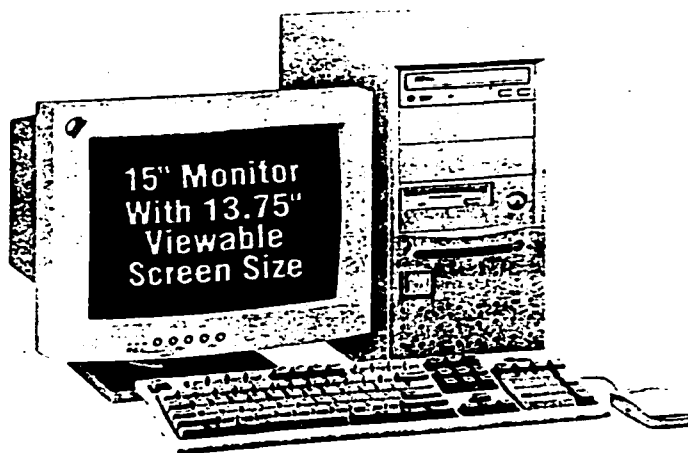
- E. Can you think of any celebrities (not listed above) that would be very effective in selling auto insurance by endorsing the insurance company in an advertisement? If so, list the names below.

**END OF SURVEY - THANK YOU**

## **APPENDIX D: EXPERIMENT ONE ADVERTISING STIMULI**

**Rated  
#1**

in **Overall Performance**  
by *Consumer's Digest*  
magazine\*



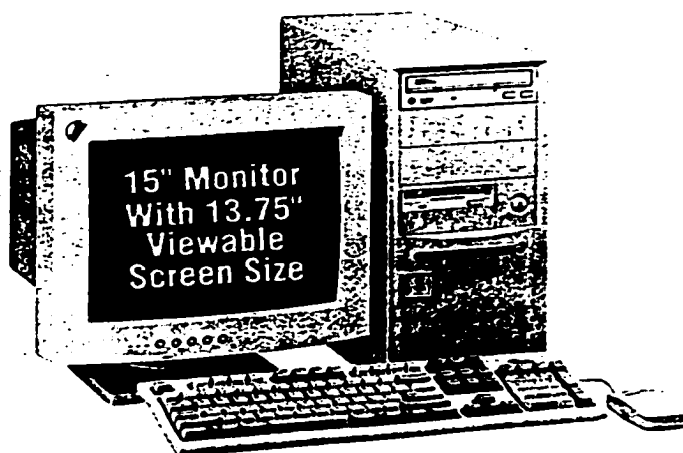
## HP "Brio" 200

- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

- \* Based on speed, convenience, upgradability, and reliability of 11 comparable brands/models tested (published 12-10-99).
- \* *Consumer's Digest* is a non-profit organization, and refuses paid advertising or product donation from manufacturers.

**Rated  
#1**

in **Overall Performance**  
by *Consumer's Digest*  
magazine\*



**Acer** 

**"Aspire" 6361**

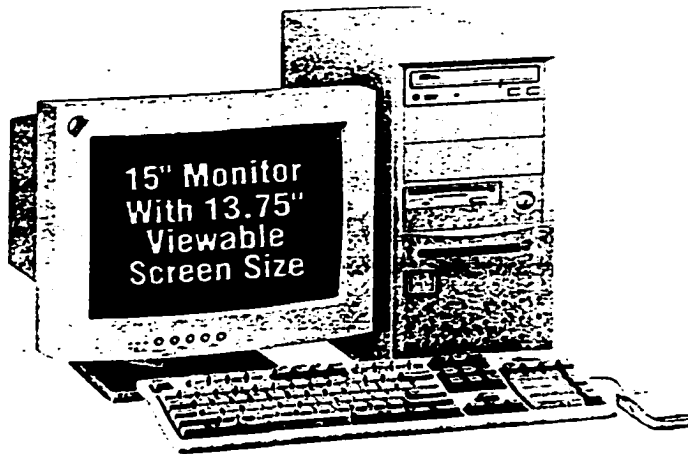
- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

\* Based on speed, convenience, upgradability, and reliability of 11 comparable brands/models tested (published 12-10-99).

\* *Consumer's Digest* is a **non-profit** organization, and refuses paid advertising or product donation from manufacturers.

**Rated  
#1**

in **Overall Performance**  
by *Consumer's Digest*  
magazine\*



### HP "Brio" 200

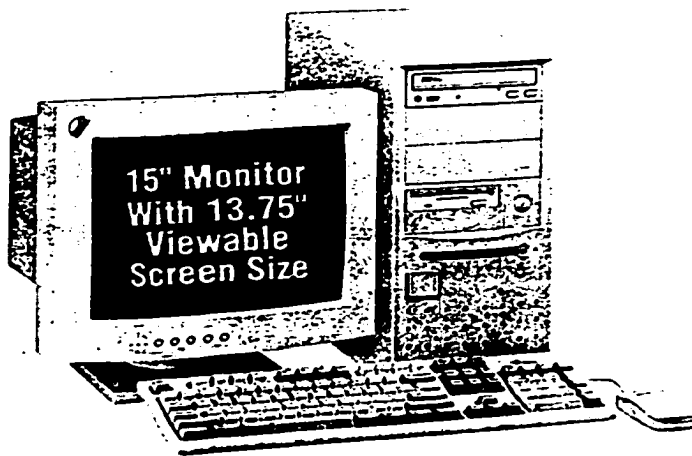
- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

\* Based on speed, convenience, upgradability, and reliability of 11 comparable brands/models tested (published 12-10-99).

\* *Consumer's Digest* is a **for-profit** organization, and accepts paid advertising and donation of computers from Hewlett-Packard.

**Rated  
#1**

in **Overall Performance**  
by *Consumer's Digest*  
magazine\*



**AceR** 

**"Aspire" 6361**

- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

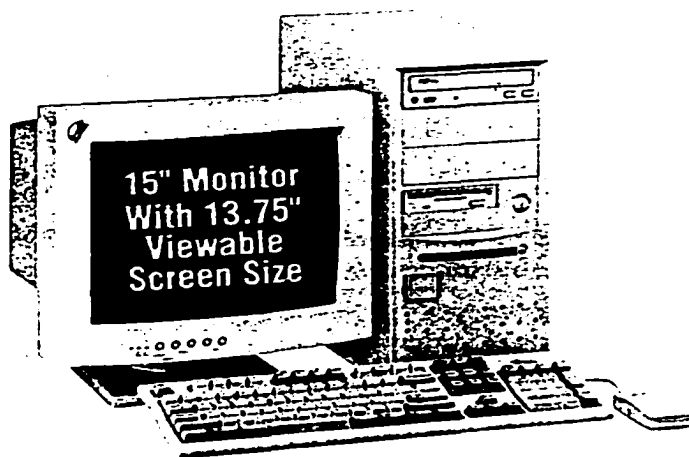
- \* Based on speed, convenience, upgradability, and reliability of 11 comparable brands/models tested (published 12-10-99).
- \* *Consumer's Digest* is a **for-profit** organization, and accepts paid advertising and donation of computers from Acer.



## What PC Do You Use At Home?

"An HP Brio"

**Tom Brokaw**  
anchor, *NBC News*\*



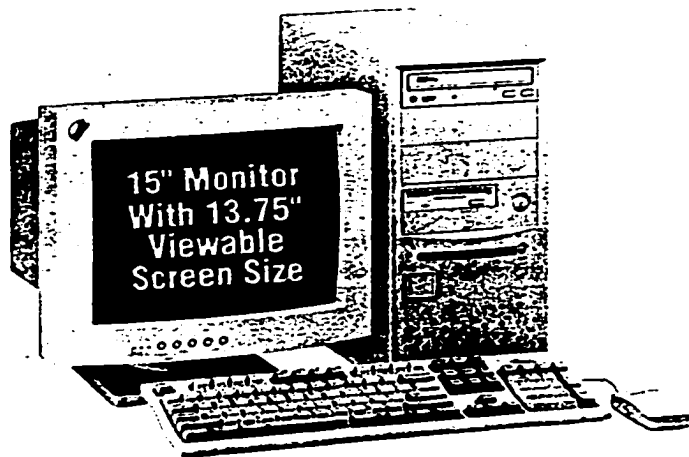
### HP "Brio" 200

- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

\* Mr. Brokaw received total compensation of \$ 1.00 for this endorsement. He paid for his HP Brio with his own funds.

## **What PC Do You Use At Home?**

**"An Acer Aspire"** **Tom Brokaw**  
anchor, *NBC News*\*



**Acer** 

**"Aspire" 6361**

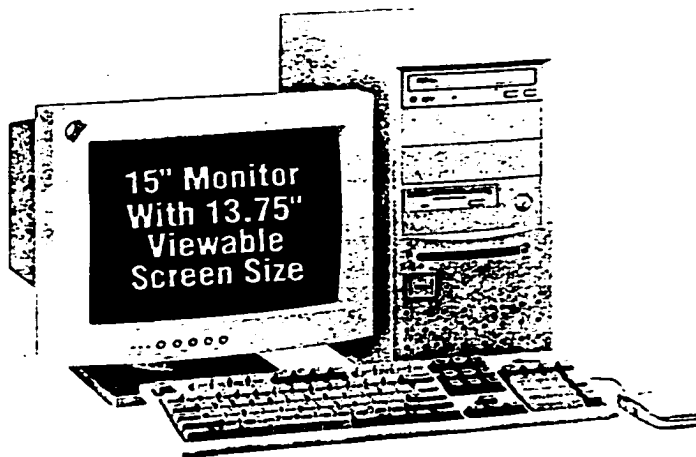
- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

\* Mr. Brokaw received total compensation of \$ 1.00 for this endorsement. He paid for his Acer Aspire with his own funds.

## What PC Do You Use At Home?

"An HP Brio"

**Tom Brokaw**  
anchor, *NBC News*\*



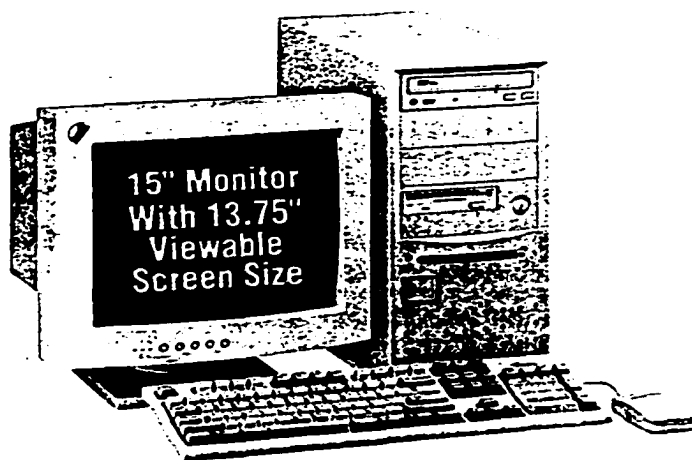
### HP "Brio" 200

- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

\* Mr. Brokaw accepted monetary compensation for this endorsement, in addition to receiving a free HP computer.

## What PC Do You Use At Home?

**"An Acer Aspire"** Tom Brokaw  
anchor, *NBC News*\*

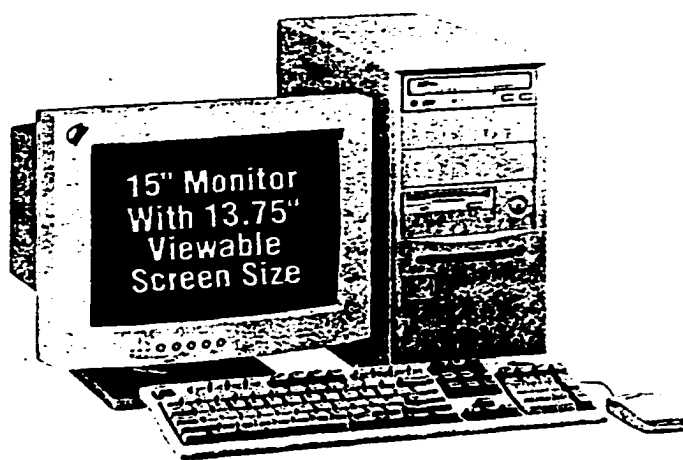


**Acer** 

**"Aspire" 6361**

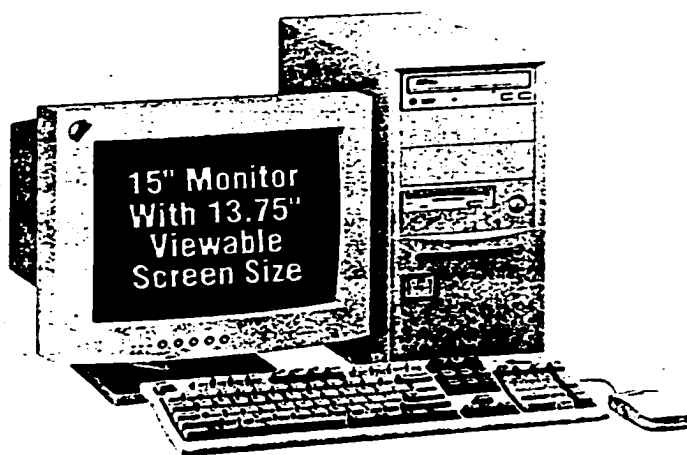
- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

\* Mr. Brokaw accepted monetary compensation for this endorsement, in addition to receiving a free Acer computer.



## **HP "Brio" 200**

- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem



**Acer** 

**"Aspire" 6361**

- 500 MHz
- 64 MB SDRAM
- 13 GB hard drive
- 56K V.90 modem

## **APPENDIX E: EXPERIMENT ONE QUESTIONNAIRE**

## ***ADVERTISING SURVEY***

### **Consent Form**

This questionnaire will ask you to draw upon your experience as a consumer and respond to statements and questions. There are no 'right' or 'wrong' answers, but please take the time to give us your honest opinion. Answering these questions should cause you no distress. Participation is voluntary and you may withdraw at any time. Individual responses will be totaled and reported in aggregate form - readers of the report will be unaware of your identity or your individual responses. However, to receive extra credit from your instructor, you must sign your name to this consent form (indicating your voluntary participation in the study).

Student Name (signed) \_\_\_\_\_

Last Name (printed) \_\_\_\_\_

Student ID # \_\_\_\_\_

Dwane Dean, Investigator  
Department of Marketing  
Louisiana State University  
3124 CEBA  
388-8417



# IMPORTANT!

Take a moment to read the advertisement on the opposite page. Please read the entire ad. The questions that follow refer specifically to the advertisement.

For most of the questions, you may view the ad and the question at the same time. However, questions on the last page must be answered without reference to the ad.

Each group of questions is preceded by bold-font instructions. Questions in a group may appear very similar. Even so, respond to each question. Do not skip questions. The end of the questionnaire is marked "END OF SURVEY".

- A. For each statement, please express your agreement or disagreement with the statement by circling the number that most closely matches your response. Note that 7 is the favorable end of the scale.**

1. Within its PC class, the advertised personal computer is a superior product.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. The advertised PC is the best in its product class.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. The advertised PC will perform better than other personal computers in its class.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. Among personal computers in its price range, the advertised PC is definitely a quality product.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**B. Continue on with this section. The same instructions apply.**

1. Based on information in the ad, I can predict the performance of the advertised PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. Based on information in the ad, I can evaluate the quality of the advertised PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. Based on information in the ad, I can estimate how satisfied I would be in using the advertised PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. Based on information in the ad, I can compare the advertised PC to other brands.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**C. Continue on with this section. The same instructions apply.**

1. If I were considering the purchase of a PC, I would ask other people to recommend a brand/model.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. I would feel more comfortable buying a PC if I have gotten other people's opinions on it.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. I would want to seek advice from other people before I purchased a PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. I would feel more secure in my choice if I consulted with other people before I purchased a PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**D. Assume that the advertiser is required by law to disclose the relationship between any endorser of the product and the advertiser. Then:**

1. The statements about the PC in the ad are sincere.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. The information in the ad about the PC is believable.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. The advertiser of the PC is being truthful in the ad.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. The advertiser of the PC is being honest in the ad.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**E. Continue on with this section. The same instructions apply.**

1. Compared to other PC brands, I hold the manufacturer of the advertised PC in high regard.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. The company that makes the advertised PC deserves my respect.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. I can trust the company that makes the advertised PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. I admire the company that makes the advertised PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**F. Continue on with this section. The same instructions apply.**

1. The endorser of the advertised PC (*Tom Brokaw*) deserves my respect.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. I can trust the endorser of the advertised PC (*Tom Brokaw*).

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. I hold the endorser of the advertised PC (*Tom Brokaw*) in high regard.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. I admire the endorser of the advertised PC (*Tom Brokaw*).

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**G. Continue on with this section. The same instructions apply.**

1. The advertised PC "stands out" from other personal computers in its class.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. The advertised PC is very different from other PC brands in its price range.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. Compared to other personal computers in its class, the advertised PC is "unique".

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. The advertised PC has no equal among other personal computers in its class.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**H. Assume that you are a typical consumer who needs a computer, and that the price of the advertised PC is similar to the price of other brands you are considering. Then:**

1. Purchase of the advertised PC would probably be a wrong choice.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. Purchase of the advertised PC would be a very risky choice.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. It is likely that the consumer would be unsatisfied with the advertised PC.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. It is likely that the advertised PC would not meet the expectations of the consumer.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**I. The following scales refer to your attitude toward personal computers as a product class. Personal computers are:**

unimportant    1   2   3   4   5   6   7   important

mean nothing to me    1    2    3    4    5    6    7    mean a lot to me

do not matter to me      1   2   3   4   5   6   7      matter a lot to me

insignificant    1   2   3   4   5   6   7    significant

of no concern    1    2    3    4    5    6    7    are of concern

**J. Now, turn the advertisement page up and over so that it is no longer visible to you. Please answer the following questions without referring to the ad. Circle your response. Do not guess.**

1. Did the ad contain an endorsement for the PC?    Yes    No    Don't know

2. If an endorsement was present, who was the endorser?

          a person            a magazine            I don't know

3. If a magazine endorsed the PC, was the magazine non-profit or for-profit?

          for-profit            non-profit            I don't know

4. Before you read this ad, what was your perception of the Acer brand image? (Image is defined as the degree to which you would consider purchase of the brand and recommend it to others)

low brand image    1    2    3    4    5    6    7    high brand image

5. Please indicate your gender.    Male    Female

6. Please indicate your degree of familiarity with each of the following:

*Consumer's Digest* magazine

Highly unfamiliar    1    2    3    4    5    6    7    Highly familiar

*Tom Brokaw*

Highly unfamiliar    1    2    3    4    5    6    7    Highly familiar

7. Please indicate your perception of the computer expertise of the following:  
(Expertise is defined as accuracy and breadth of knowledge of a subject)

*Consumer's Digest* magazine

Very Low Expertise    1    2    3    4    5    6    7    Very High Expertise

*Tom Brokaw*

Very Low Expertise    1    2    3    4    5    6    7    Very High Expertise

8. Do you have a computer for your own personal use? (Circle your response)

          Yes            No

9. If you have a personal computer, did you participate in the choice of brand and model when the computer was purchased? (Circle your response)

          Yes            No

**END OF SURVEY - THANKS**

## **APPENDIX F: EXPERIMENT TWO ADVERTISING STIMULI**

**Rated**

**#1**

in **Claims Satisfaction**  
by *Consumer's Digest*  
magazine\*



**GEICO**

AUTO  
INSURANCE

*"We'll always be there for you"*

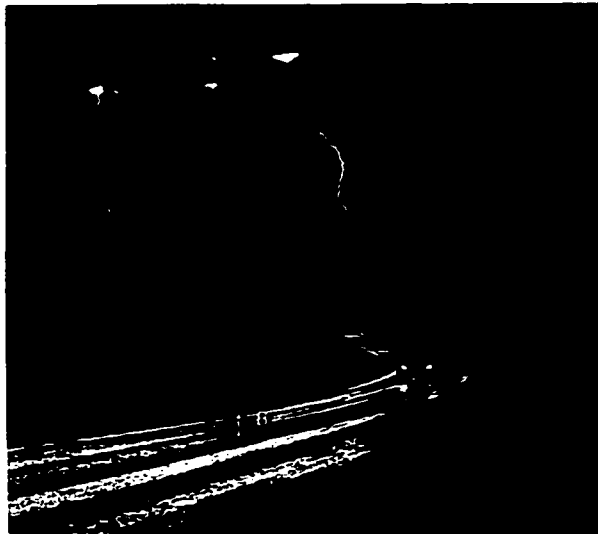
\* Based on the claims experience of 32,000 policyholders of 26 different auto insurance companies (published 12-10-99).

\* *Consumer's Digest* is a **non-profit** organization that refuses paid advertising or donations from insurance companies.



**Rated  
#1**

in **Claims Satisfaction**  
by *Consumer's Digest*  
magazine\*



**AUTO  
INSURANCE**

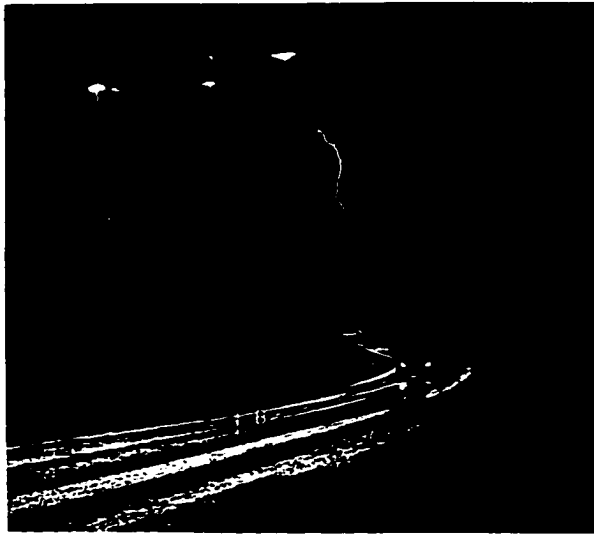
*"We'll always be there for you"*

- \* Based on the claims experience of 32,000 policyholders of 26 different auto insurance companies (published 12-10-99).
- \* *Consumer's Digest* is a **non-profit** organization that refuses paid advertising or donations from insurance companies.

**Rated**

**#1**

in **Claims Satisfaction**  
by *Consumer's Digest*  
magazine\*



**GEICO**

**AUTO  
INSURANCE**

*"We'll always be there for you"*

- \* Based on the claims experience of 32,000 policyholders of 26 different auto insurance companies (published 12-10-99).
- \* *Consumer's Digest* is a **for-profit** organization that accepts paid advertising and donations from GEICO Insurance.

Rated  
**#1**

in **Claims Satisfaction**  
by *Consumer's Digest*  
magazine\*



AUTO  
INSURANCE

*"We'll always be there for you"*

- \* Based on the claims experience of 32,000 policyholders of 26 different auto insurance companies (published 12-10-99).
- \* *Consumer's Digest* is a **for-profit** organization that accepts paid advertising and donations from SHELTER Insurance.

## Who Insures Your Family Car?

"Geico"

**Mario Andretti**

winner, *Indianapolis 500*\*



**GEICO**

AUTO  
INSURANCE

*"We'll always be there for you"*

\* Mr. Andretti received total compensation of \$ 1.00 for this endorsement. He purchases GEICO auto insurance at the regular rate.

## Who Insures Your Family Car?

"Shelter" **Mario Andretti**  
winner, *Indianapolis 500*\*



AUTO  
INSURANCE

*"We'll always be there for you"*

\* Mr. Andretti received total compensation of \$ 1.00 for this endorsement. He purchases SHELTER auto insurance at the regular rate.

## Who Insures Your Family Car?

"Geico"

**Mario Andretti**  
winner, *Indianapolis 500*\*



**GEICO**

AUTO  
INSURANCE

*"We'll always be there for you"*

\* Mr. Andretti accepted monetary compensation for this endorsement, in addition to receiving free GEICO auto insurance.

## Who Insures Your Family Car?

**"Shelter"** **Mario Andretti**  
winner, *Indianapolis 500*\*



**AUTO  
INSURANCE**

*"We'll always be there for you"*

\* Mr. Andretti accepted monetary compensation for this endorsement, in addition to receiving free SHELTER auto insurance.



**GEICO.**

AUTO  
INSURANCE

*"We'll always be there for you"*





AUTO  
INSURANCE

*"We'll always be there for you"*

## **APPENDIX G: EXPERIMENT TWO QUESTIONNAIRE**

## ***ADVERTISING SURVEY***

### **Consent Form**

This questionnaire will ask you to draw upon your experience as a consumer and respond to statements and questions. There are no 'right' or 'wrong' answers, but please take the time to give us your honest opinion. Answering these questions should cause you no distress. Participation is voluntary and you may withdraw at any time. Individual responses will be totaled and reported in aggregate form - readers of the report will be unaware of your identity or your individual responses. However, to receive extra credit from your instructor, you must sign your name to this consent form (indicating your voluntary participation in the study).

Student Name (signed) \_\_\_\_\_

Last Name (printed) \_\_\_\_\_

Student ID # \_\_\_\_\_

Dwane Dean, Investigator  
Department of Marketing  
Louisiana State University  
3124 CEBA  
388-8417

# IMPORTANT!

Take a moment to read the advertisement on the opposite page. Please read the entire ad. The questions that follow refer specifically to the advertisement.

For most of the questions, you may view the ad and the question at the same time. However, questions on the last page must be answered without reference to the ad.

Each group of questions is preceded by bold-font instructions. Questions in a group may appear very similar. Even so, respond to each question. Do not skip questions. The end of the questionnaire is marked "END OF SURVEY".

**A. For each statement, please express your agreement or disagreement with the statement by circling the number that most closely matches your response. Note that 7 is the favorable end of the scale.**

1. The advertised auto insurance is superior to other brands of auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

2. The advertised auto insurance is the best brand of insurance I will find.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

3. The advertised auto insurance will perform better than other brands of auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

4. Among auto insurers, the advertised company is definitely a quality brand.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

**B. Continue on with this section. The same instructions apply.**

1. Based on information in the ad, I can predict the performance of the advertised auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

2. Based on information in the ad, I can evaluate the quality of the advertised auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

3. Based on information in the ad, I can estimate how satisfied I would be with the advertised auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

4. Based on information in the ad, I can compare the advertised auto insurance to other brands of auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

**C. Continue on with this section. The same instructions apply.**

1. If I were considering the purchase of auto insurance, I would ask other people to recommend a company.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

2. I would feel more comfortable buying auto insurance if I have gotten other people's opinions on it.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

3. I would want to seek advice from other people before I purchased auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

4. I would feel more secure in my choice if I consulted with other people before I purchased auto insurance.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

**D.     Assume that the advertiser is required by law to disclose the relationship between any endorser of the product and the advertiser. Then:**

1.     The statements about the auto insurance in the ad are sincere.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
2.     The information in the ad about the auto insurance is believable.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
3.     The advertiser of the auto insurance is being truthful in the ad.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
4.     The advertiser of the auto insurance is being honest in the ad.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**E.     Continue on with this section. The same instructions apply.**

1.     Compared to other auto insurance brands, I hold the advertised insurer in high regard.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
2.     The advertised auto insurance company deserves my respect.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
3.     I can trust the advertised auto insurance company.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
4.     I admire the advertised auto insurance company.  
Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**F. Continue on with this section. The same instructions apply.**

1. The endorser of the advertised insurance (*Mario Andretti*) deserves my respect.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. I can trust the endorser of the advertised insurance (*Mario Andretti*).

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. I hold the endorser of the advertised insurance (*Mario Andretti*) in high regard.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. I admire the endorser of the advertised insurance (*Mario Andretti*).

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**G. Continue on with this section. The same instructions apply.**

1. The advertised auto insurance "stands out" from other auto insurance policies.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. The advertised auto insurance is very different from that sold by other auto insurance companies.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. Compared to other auto insurance, the advertised auto insurance is "unique".

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. The advertised auto insurer has no equal among auto insurance companies.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

**H. Assume that you are a typical consumer who needs auto insurance, and that the price of the advertised insurance is similar to the price of auto insurance from other companies you are considering. Then:**

1. Purchase of the advertised insurance would probably be a wrong choice.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

2. Purchase of the advertised insurance would be a very risky choice.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

3. It is likely that the consumer would be unsatisfied with the advertised insurance.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree

4. It is likely that the advertised auto insurance would not meet the expectations of the consumer.

**Strongly Disagree    1    2    3    4    5    6    7    Strongly Agree**

**I. The following scales refer to your attitude toward auto insurance as a product class. Auto insurance is:**

unimportant    1    2    3    4    5    6    7    important

means nothing 1 2 3 4 5 6 7 means a lot  
to me to me

does not matter 1 2 3 4 5 6 7 matters a lot  
to me to me

insignificant   1   2   3   4   5   6   7   significant

of no concern    1    2    3    4    5    6    7    of concern



**J. Now, turn the advertisement page up and over so that it is no longer visible to you. Please answer the following questions without referring to the ad. Circle your response. Do not guess.**

1. Did the ad contain an endorsement for the insurance? Yes No Don't know

2. If an endorsement was present, who was the endorser?

a person a magazine I don't know

3. If a magazine endorsed the insurance, was the magazine non-profit or for-profit?

for-profit non-profit I don't know

4. Before you read this ad, what was your perception of the SHELTER brand image? (Image is defined as the degree to which you would consider purchase of the brand and recommend it to others)

low brand image 1 2 3 4 5 6 7 high brand image

5. Please indicate your gender. Male Female

6. Please indicate your degree of familiarity with each of the following:

*Consumer's Digest* magazine

Highly unfamiliar 1 2 3 4 5 6 7 Highly familiar

*Mario Andretti*

Highly unfamiliar 1 2 3 4 5 6 7 Highly familiar

7. Please indicate your perception of the auto insurance expertise of the following: (Expertise is defined as accuracy and breadth of knowledge of a subject)

*Consumer's Digest* magazine

Very Low Expertise 1 2 3 4 5 6 7 Very High Expertise

*Mario Andretti*

Very Low Expertise 1 2 3 4 5 6 7 Very High Expertise

8. Do you have an auto insurance policy in your name? (Circle your response)

Yes No

9. If you have an auto insurance policy in your name, did you actively choose the insurance company or did you blindly follow the choice of your parents/family member/friend? (Circle your response)

Active Choice Blindly Followed

**END OF SURVEY - THANKS**

## **VITA**

Dwane Hal Dean was born in Stillwater, Oklahoma, on November 30, 1951. His early career focused on the dental profession. Dwane received a bachelor of science degree in pre-medical science from Oklahoma State University in 1974, and the degree of Doctor of Dental Surgery from the University of Oklahoma in 1977. He completed specialty training in oral pathology at the University of Alabama School of Dentistry, and he was subsequently awarded Diplomate status by the American Board of Oral Pathology.

Concurrent with his oral pathology training, Dwane pursued an interest in laboratory research. He received a Postdoctoral Research Fellowship from the National Institute of Dental Research to fund his education and research in oral biology. From studies during this period, Dwane received a master's degree in experimental pathology from the University of Alabama at Birmingham in 1983.

More recently, Dwane has pursued a career in academic marketing. He will receive the degree of Doctor of Philosophy in business administration (marketing) from Louisiana State University in August, 2000.


# DOCTORAL EXAMINATION AND DISSERTATION REPORT

**Candidate:** Dwane Hal Dean

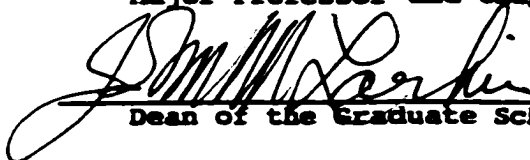
**Major Field:** Business Administration (Marketing)

**Title of Dissertation:** Third-Party Organization Endorsement of Products: An Advertising Cue Affecting Consumer Pre-Purchase Evaluation of Goods and Services

**Approved:**



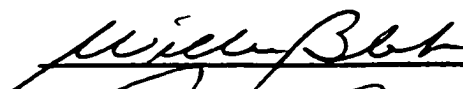
Major Professor and Chairman



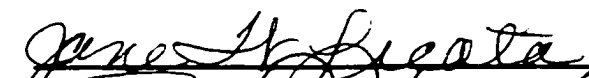
Dean of the Graduate School

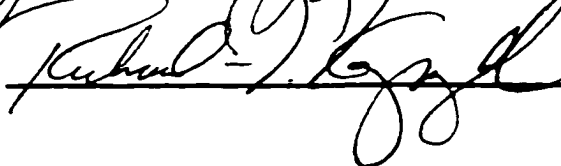
## EXAMINING COMMITTEE:











**Date of Examination:**

June 19, 2000